Campus Competition & Activity Community — Requirements Specification Document

Document Information	Content
Project Name	Campus Competition & Activity Community
Provisional English Name	Campus Competition & Activity Community
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Product Format	WeChat Mini Program
Related Blog	Assignment 2 Blog

This specification defines the project's users, functions, business rules, delivery scope, and acceptance criteria for use in requirements review, design, development, and testing. The product focuses on academic competitions, supplemented by campus activities. Its first version will establish a working flow covering competition discovery, skill matching, team applications, and Team Captain review.

This document is based on the Assignment 2 blog and team discussions. The following have been confirmed: simple skill matching is included in P0, and matching any one required skill is sufficient; students who do not match may still apply, with their names highlighted in the Team Captain's application review list; the Team Captain sets the team's maximum total size, including the Team Captain, which must not exceed the competition's prescribed limit; when the team is full, applicants receive the reply “This team is full.”; name and college are required, and the corresponding Team Captain may view only the applicant's name, college, skills, and short textual resume during review. Other students cannot view student profiles. Unresolved requirements affecting functionality and acceptance are collected in Appendix A.

1 Document Purpose and Terminology

1.1 Purpose

Organize the project direction described in the blog into requirements that can be discussed, traced, and verified through acceptance checks, defining the system's

expected behavior and the scope of each stage this semester. This document is an initial requirements draft; no software implementation results, findings from actual user research, or acceptance pass records are currently available.

The original assignment post requires a “Requirements Specification Document” as a blog attachment, without specifying a file format, page count, or dedicated template. This document is maintained as a Markdown source draft and is available as a PDF attachment to the Assignment 2 blog.

1.2 Intended Readers

The project team, course instructors and teaching assistants, and participants in requirements review, product trials, and functional acceptance.

1.3 Terminology and Statuses

Term	Meaning
Competition Hub	The entry point for finding, browsing, searching, and filtering competitions
Competition-specific Community	A space associated with one competition, containing its introduction, discussions, recruitment, and shared resources
Skill Profile	Personal information and predefined skill tags entered by a student through a form
Simple Skill Matching	Determining whether a student's skills match a team's recruitment requirements using predefined skill tags
Team Captain	A student who creates a team on the platform and reviews applications to join it
P0	The functional scope of the first minimum viable version
P1	Improvements planned after the basic version
P2	Subsequent extensions
FR	Functional requirement identifier
BR	Business rule identifier
NFR	Nonfunctional requirement identifier
Confirmed	A product direction or rule has been confirmed in discussions
Proposed / Planned	A solution has been proposed, but its scope or operating standards still require review
Pending Confirmation	No final decision has been made

CodeStrike's Overall Project Lead and five development work groups belong to project organization and management. Students, Team Captains, and administrators are product user roles. These two sets of roles are managed separately.

2 Project Background and Goals

2.1 Background and Requirements Assumptions

Current discussions identify the following issues: competition information is spread across university notices, group chats, and competition websites; students find it inconvenient to locate teammates with complementary skills; recruitment information lacks a consistent format; preparation experience and materials are difficult to retrieve over time; and team tasks, materials, and progress may be spread across different tools after team formation.

These are requirements assumptions made during topic selection. Their sources and validation status are described in Section 2.3. There is currently no evidence supporting quantified outcomes such as time savings or efficiency improvements.

2.2 Product Positioning and Goals

Build a student communication and collaboration platform focused on academic competitions, with campus activities as a supplement, using a two-layer structure of “Competition Hub + competition-specific communities.”

The priority this semester is to establish the following core flow:

Discover a competition → view its community → find or create a team → perform simple skill matching → submit an application → receive Team Captain review → complete team formation.

Expected benefits include easier access to competition information, standardized recruitment descriptions, lower skill-screening and communication costs, and the gradual accumulation of competition experience. Specific user benefits must be validated through product trials.

2.3 Requirements Sources and Validation Status

The execution plans for user research, competitive analysis, and product-trial validation are maintained in the blog's project plan. This section records the basis for requirements and the supporting validation evidence for subsequent review and traceability.

Source or Validation Method	Current Evidence Status	Records to Retain
Team discussions	Product positioning, first-version matching rules, the team-size definition, and profile access boundaries have been established	Discussion conclusions and related requirement identifiers
User interviews, questionnaires, or observation	Requirements remain assumptions; no findings from actual user research have been provided	Actual sources, sample scope, user problems, and findings
Competitive analysis	Current analysis compares types of alternative solutions; no verification of specific platforms' functions has been provided	Platform names, verification sources, functional comparisons, and applicable scope
Product-trial validation	No product-trial results or measurements of user benefits are available	Test version, usage scenarios, user feedback, and validation findings

3 User Roles and Use Scenarios

3.1 User Roles

Role	Main Goals	Current Permission Boundaries
Student	Learn about competitions, maintain a personal profile, find teams, apply to join teams, and participate in discussions	May enter and view their own profile; cannot view other students' profiles
Team Captain	Create teams, set recruitment requirements, review applications, and complete recruitment	During review of applications to their own team, may view only the relevant applicant's name, college, skills, and short textual resume; cannot freely browse other students' profiles
Previous Competition Participant	Share preparation experience and materials	A student use scenario; posting and review rules are pending confirmation
Administrator	Maintain competitions, content, and users	Detailed management permissions require refinement; exceptions allowing administrators to view

Role	Main Goals	Current Permission Boundaries
		complete student profiles have not been determined

The primary target users are students who want to compete but have not found a team, Team Captains who need more members, and students who want to learn about competitions and exchange experience. Campus activity participants are a supplementary user group.

Access to public competitions or community content without logging in, account verification methods, and detailed administrator permissions are covered by TBD-08 in Appendix A.

3.2 Scenario One: Finding a Competition Team

Goal: Students understand team recruitment requirements and skill-matching results, submit an application, and learn its review outcome; non-matching students may also apply.

The planned flow is: register or log in → complete a personal skill profile → browse or search for competitions → enter a competition-specific community → view team recruitment requirements and matching results → submit an application → wait for Team Captain review → view the approval or rejection result. Once approved, the applicant becomes a member and communicates using contact information voluntarily provided by both parties.

Duplicate pending applications must not be generated. Students whose skills have no overlap with the team's required skills may still apply, with their names highlighted in the Team Captain's review list; the Team Captain makes the final approval or rejection decision. The total team size includes the Team Captain. Once the limit is reached, new applications are no longer accepted, and applicants are shown the fixed reply “This team is full.” Existing pending applicants should also receive this reply. Whether contact information may be exchanged before review remains to be confirmed.

3.3 Scenario Two: Creating a Team and Reviewing Applications

Goal: A Team Captain publishes recruitment information under a specified competition and selects team members.

The planned flow is: log in → select a competition → create a team → enter the team name, size, skills, and recruitment description → receive applications → view applicant profiles during review → approve or reject → update team members and recruitment status.

The Team Captain sets the maximum total team size, including the Team Captain, and it must not exceed the competition's prescribed limit. For example, with a limit of 3 people, the Team Captain occupies 1 place, leaving room for at most 2 other members. Multiple independent teams may exist under the same competition, each managing its own recruitment information and applications.

3.4 Scenario Three: Participating in Competition Discussions

A student enters the target competition-specific community to browse its introduction, dates, participation requirements, discussions, experience, and resources, and posts, comments, or bookmarks content according to the posting permissions eventually confirmed. Discussion posts, recruitment posts, and resource posts are the currently proposed categories; detailed posting and review rules have not yet been decided.

3.5 Scenario Four: Participating in Campus Activities

In the later activity module, users browse lists, view details, register for or bookmark activities, and view their personal activity records. This scenario is part of the P2 plan; all of its functions are not required to be completed in the first version.

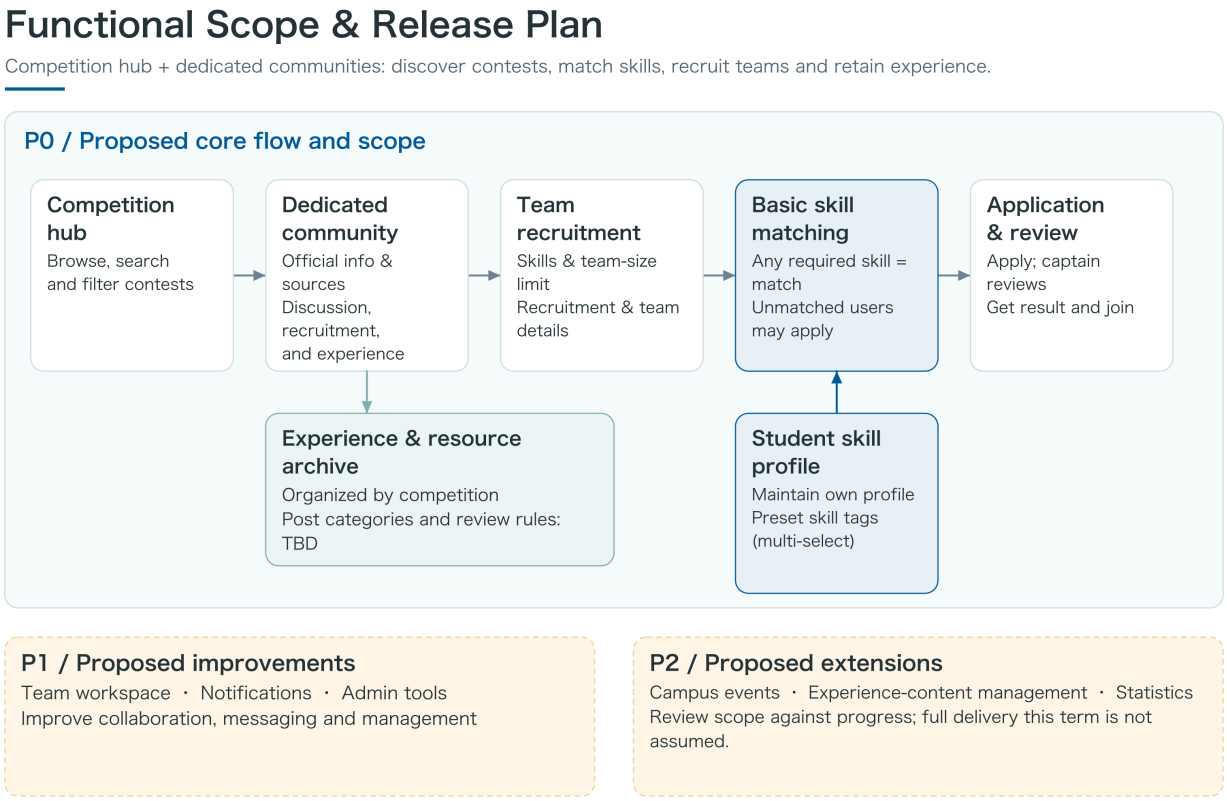
4 Product Scope and Development Priorities

4.1 First-Version Scope and Subsequent Plans

Simple skill matching has been confirmed for P0. The remaining stage lists follow the current priority proposals; the final delivery baseline still needs to be determined in light of the course schedule.

Stage	Functional Scope	Stage Goal
P0	User system, personal profiles, Competition Hub, competition details, competition-specific communities, simple skill matching, basic team applications, and Team Captain review	Complete the flow of competition discovery, rule-based matching, application review, and joining a team
P1	Team workspace, message notifications, and administration dashboard	Improve collaboration, notifications, and management after team formation
P2	Campus activities, improved management of experience content, and data statistics	Extend activity services and content management

The first version does not support custom skill tags, introduce complex AI models, machine learning, or complex matching percentages, or include an instant messaging system. Team tasks, milestones, deliverable file management, activity registration, and data statistics will be reviewed in their respective stages; the full roadmap is not a commitment to deliver everything in the first version.



Caption: P0 connects competition discovery, skill matching, and application review; P1 / P2 will proceed according to subsequent reviews.

4.2 Overall Page Architecture

Module	Pages and Functions in the Overall Plan
A Competition Hub	List, keyword search, category filters, competition bookmarks, and details entry points
B Competition Details and Competition-specific Community	Introduction, dates, participation requirements, official sources, discussions, recruitment, experience, and materials
C Intelligent Team Formation	Student skill profiles, team creation, recruitment requirements, rule-based matching, applications, review, and team-size management

Module	Pages and Functions in the Overall Plan
D My Teams	Teams joined, member lists, basic tasks, milestones, and team deliverables
E Campus Activities	Activity lists, details, registration, and bookmarks
F Personal Center	Basic personal information, skill profile, personal introduction, competition experience, bookmarks, applications, and teams
G Message Center	Team-application notifications, review-result notifications, and task reminders
H Administration Dashboard	Competition information maintenance, community content review, user management, and data statistics

This is the overall product structure. The delivery stage for individual functions within each page follows Section 4.1 and subsequent requirements review results.

5 Functional Requirements

The acceptance criteria for each requirement are derived from the current product rules for use in requirements review and test design. They do not indicate that the system has been implemented or passed testing. Criteria that depend on undecided rules should be completed after those rules are confirmed.

FR-01 Account Registration and Login

- **Status and Stage**: The user system is proposed for P0; registration and login scenarios have been defined.
- **Requirement**: Students can create an account, log in, and associate their personal profiles, applications, and teams with that account.
- **Acceptance Criteria**: Users can access their own functions through the registration and login methods eventually confirmed; personal information and application records for different accounts can be distinguished.
- **Details to Refine**: Identity verification, required registration fields, account recovery, and access without logging in.

FR-02 Student Profiles

- **Status and Stage**: Form-based data entry, required name and college, and fields visible during review have been confirmed; P0.
- **Requirement**: Users maintain name, student ID, college, major, gender, MBTI, hobbies, areas of expertise, and skill tags through a form, and enter a short textual resume. The resume is entered as text and may include relevant experience.

- **Acceptance Criteria**: A profile cannot be saved as valid if name or college is missing, and missing fields are identified; users can view their own saved information. During review of that user's application, the corresponding Team Captain may view only name, college, skills (predefined skill tags), and a short textual resume; other fields such as student ID, major, gender, MBTI, and hobbies are not displayed to the Team Captain. Other students cannot view the profile.
- **Details to Refine**: Whether other fields and the textual resume are required, resume length limits, and access permissions after review.

Student Profile Access Boundaries

Four fields visible during application review

Name | College | Preset skill tags | Brief text resume

Viewer	Four review fields	Other profile fields	Access condition
Self	View & edit	View & edit	Owner's own account profile
This team's captain	View	Not shown	Only while reviewing this team's application
Other students / unrelated captains	No access	No access	No browsing access to other students' profiles
Administrator	TBD	TBD	Exceptions are not yet defined

Other profile fields: student ID, major, gender, MBTI, interests and a separate specialty field.

Matching criteria
Gender and MBTI are not used in default skill matching.

Access rules to review
Access after review and administrator exceptions.

Caption: Users maintain their own profiles; the corresponding Team Captain may view only name, college, skill tags, and a short textual resume when reviewing applications to their own team. Other students cannot view the profile.

FR-03 Predefined Skill Tags

- **Status and Stage**: Confirmed; P0.
- **Requirement**: Users select multiple tags from the system's predefined skill tags; personal profiles and team recruitment use the same tag set. The first version does not provide custom tags.
- **Current Tag Examples**: Python, Java, C++, MATLAB, data analysis, mathematical modeling, algorithm design, UI/UX, frontend development, backend development, copywriting, and PPT creation.

- **Acceptance Criteria**: Multiple predefined tags can be selected and saved; the same skill uses a consistent name in profiles and recruitment; users cannot create custom tags through the user interface.
- **Details to Refine**: The final tag list, how tags are updated, and the prompt shown when no tag is selected.

FR-04 Competition Hub

- **Status and Stage**: The page direction has been confirmed; the P0 scope is proposed.
- **Requirement**: Provide competition lists, keyword search, category filtering, and details entry points; competition bookmarks are part of the overall plan.
- **Acceptance Criteria**: Users can enter the correct competition details from the list; configured keywords and categories return results consistent with the current data; a clear message is shown when there are no results.
- **Details to Refine**: Category standards, search fields, sorting, the delivery stage for bookmarks, and competition information sources.

FR-05 Competition Details and Competition-specific Communities

- **Status and Stage**: The direction has been confirmed; the P0 scope is proposed.
- **Requirement**: Each competition has a dedicated communication space containing its introduction, dates, participation requirements, official information sources, and related discussions, recruitment information, and resources.
- **Acceptance Criteria**: Users enter the corresponding community from a specified competition, and displayed content is associated with that competition; recruitment information for different teams under the same competition can be displayed separately.
- **Details to Refine**: Responsibility for maintaining competition information, official-source verification, handling outdated information, and community content categories.

FR-06 Community Content and Discussions

- **Status and Stage**: The discussion direction has been confirmed; discussion posts, recruitment posts, and resource posts are proposed categories.
- **Requirement**: Support discussion of questions and sharing of experience and materials; support posts, comments, and content bookmarks according to the posting rules eventually confirmed.
- **Acceptance Criteria**: Within the corresponding version's scope, content is associated with the target competition, and users can complete the confirmed

posting and viewing flows.

- **Details to Refine**: Permissions for posting, editing, deleting, and reviewing; content categories; resource-sharing formats; and the association between recruitment posts and teams.

FR-07 Team Creation and Recruitment

- **Status and Stage**: Confirmed; P0.
- **Requirement**: A Team Captain creates a team under a specified competition, entering the team name, associated competition, maximum total team size (including the Team Captain), required skill tags, team introduction, and recruitment description. The Team Captain sets the size limit, which must not exceed the competition's prescribed limit. Recruitment size consistently means the maximum total team size, including the Team Captain.
- **Acceptance Criteria**: The corresponding recruitment information can be viewed after team creation; multiple independent teams can exist under one competition; a setting exceeding the configured competition size limit cannot create valid recruitment. With a limit of 3, a Team Captain and 2 members make the team full.
- **Details to Refine**: Handling missing competition size limits, changes to recruitment conditions, and other input validation.

FR-08 Simple Skill Matching

- **Status and Stage**: Confirmed; included in P0.
- **Requirement**: A student is considered a match when at least one of their skills overlaps with the team's required skills, supporting further communication between the parties. Students with no skill overlap may still apply, with their names highlighted in the team's own Team Captain's application review list. Matching results serve as a review reference and do not automatically approve or reject an application. Formal admission still requires Team Captain review.
- **Acceptance Criteria**: When a team requires Python, students with Python + MATLAB or Python + C++ match, while a student with only Java + UI/UX does not match but may still apply; their name is highlighted in the Team Captain's review list. When a team requires Python and Java, having either skill is sufficient to match. Matching applicants do not receive the name highlighting used for non-matches. If skills remain unchanged and only gender or MBTI changes, the default matching result remains unchanged.
- **Boundaries**: Rule-based matching does not display complex matching percentages or call complex AI models. Name highlighting is used only in an authorized Team Captain's review interface and does not make other students' profiles public.

- **Details to Refine**: Matching-result sorting, communication entry points, and the timing of contact-information exchange.

FR-09 Team Applications and Duplicate-Application Restrictions

- **Status and Stage**: Confirmed; P0.
- **Requirement**: Applicants actively apply to a target team that is not full; a skill mismatch does not prevent application. If the same user already has a pending application to the same team, an identical unprocessed application must not be generated again. Full-team feedback follows FR-11.
- **Acceptance Criteria**: Both matching and non-matching students can apply to a team that is not full. Submission displays “Pending Review”; non-matching applicants' names are highlighted in the Team Captain's review list. Repeated submission while an application remains unprocessed does not create a second pending application. Records are associated with the correct user and team.
- **Details to Refine**: Application description fields, withdrawal, reapplication after rejection, and rules for applying to multiple teams simultaneously.

FR-10 Team Captain Review and Member Admission

- **Status and Stage**: Confirmed; P0.
- **Requirement**: The Team Captain views an applicant's name, college, skills, and short textual resume when reviewing applications to their own team, and approves or rejects them. Non-matching applicants' names are highlighted, but they are not automatically rejected; the Team Captain may still approve them if the team is not full. Approved applicants formally become team members.
- **Acceptance Criteria**: Approval displays “Approved” and adds the applicant to the member records; rejection displays “Rejected” without adding a member. The Team Captain may approve non-matching applicants while the team is not full. Once the total size limit, including the Team Captain, is reached, further admission approvals are prohibited and applicants receive “This team is full.” The Team Captain may view only the four confirmed categories of information; other Team Captains cannot use their own review interfaces to view unrelated applicants' profiles.
- **Details to Refine**: Profile visibility after review, retention of review records, and rules for member withdrawal, removal, and team dissolution.

FR-11 Size Limits and Full-Team Reply

- **Status and Stage**: The total-size definition including the Team Captain, stopping new applications when full, the fixed full-team reply, and competition size-limit constraints have been confirmed; P0.

- **Requirement**: Determine capacity using the actual number of admitted members. Count the Team Captain once; pending applicants do not count as members. Once the Team Captain's limit is reached, stop accepting new applications and stop approving applications that would add members. Provide the fixed reply “This team is full.” to users attempting to apply and to existing pending applicants. This is basic application-flow feedback and does not depend on the P1 Message Center.
- **Acceptance Criteria**: With a limit of 3, a team containing a Team Captain and 2 members is full. New applications cannot be submitted successfully, existing applications cannot be approved for admission, and applicants can see the fixed full-team reply. The Team Captain cannot set a size limit above the competition's prescribed limit.
- **Details to Refine**: The final state transitions of existing pending applications after full-team feedback, the business outcomes of reviewing multiple applications concurrently, and rules for reopening recruitment; see TBD-02. Specific capacity-protection technology is defined in the design documentation.

FR-12 My Teams and Team Workspace

- **Status and Stage**: Part of the overall plan; the complete workspace is proposed for P1.
- **Requirement**: Display teams joined and their members, and gradually support basic task assignment, milestones, competition progress, and deliverable file organization.
- **Acceptance Criteria**: Within the confirmed version's scope, users can view the correct members and corresponding tasks, progress, or deliverable records. The core admission result is still verified according to FR-10.
- **Details to Refine**: Initial workspace functions, permissions within teams, file storage, and task statuses.

FR-13 Message Notifications

- **Status and Stage**: Planned; proposed for P1.
- **Requirement**: Provide notifications of team applications, review results, and task reminders.
- **Acceptance Criteria**: After the corresponding business event, recipients can view the correct notification; task reminders are checked according to rules confirmed later.
- **Details to Refine**: Notification channels, timing, read status, and the initial notification scope.

FR-14 Administration Dashboard

- **Status and Stage**: Planned; proposed for P1, with data statistics proposed for P2.
- **Requirement**: Support competition information maintenance, community content review, user management, and subsequent data statistics.
- **Acceptance Criteria**: Complete information maintenance or review according to confirmed management permissions; specific statistical indicators are checked after P2 review.
- **Details to Refine**: Administrator authorization, review procedures, competition size-limit maintenance, and statistical definitions. These requirements do not automatically grant permission to view all student profiles.

FR-15 Campus Activities

- **Status and Stage**: Planned extension; proposed for P2.
- **Requirement**: Provide activity lists, details, registration, bookmarks, and personal activity records.
- **Acceptance Criteria**: Once included in the delivery scope, users can find target activities, view their descriptions, and complete confirmed registration or bookmarking flows.
- **Details to Refine**: Activity sources, publishers, registration limits, registration information, and activity statuses.

FR-16 Personal Center and Personal Records

- **Status and Stage**: The overall page has been confirmed; personal profiles are P0, while other record functions are reviewed by version.
- **Requirement**: Provide personal information, skill profiles, personal introductions, competition experience, bookmarks, and entry points to applications and teams.
- **Acceptance Criteria**: Personal profiles follow FR-02; application statuses follow FR-09 and FR-10; other records are checked against the confirmed version.
- **Details to Refine**: First-version functions within the page and display rules for each record type.

6 Business Rules and Data Requirements

6.1 Confirmed Core Business Rules

Identifier	Rule	Related Requirements
BR-01	Competitions are the focus, supplemented by campus activities; each competition has its own community	FR-04, FR-05, FR-15

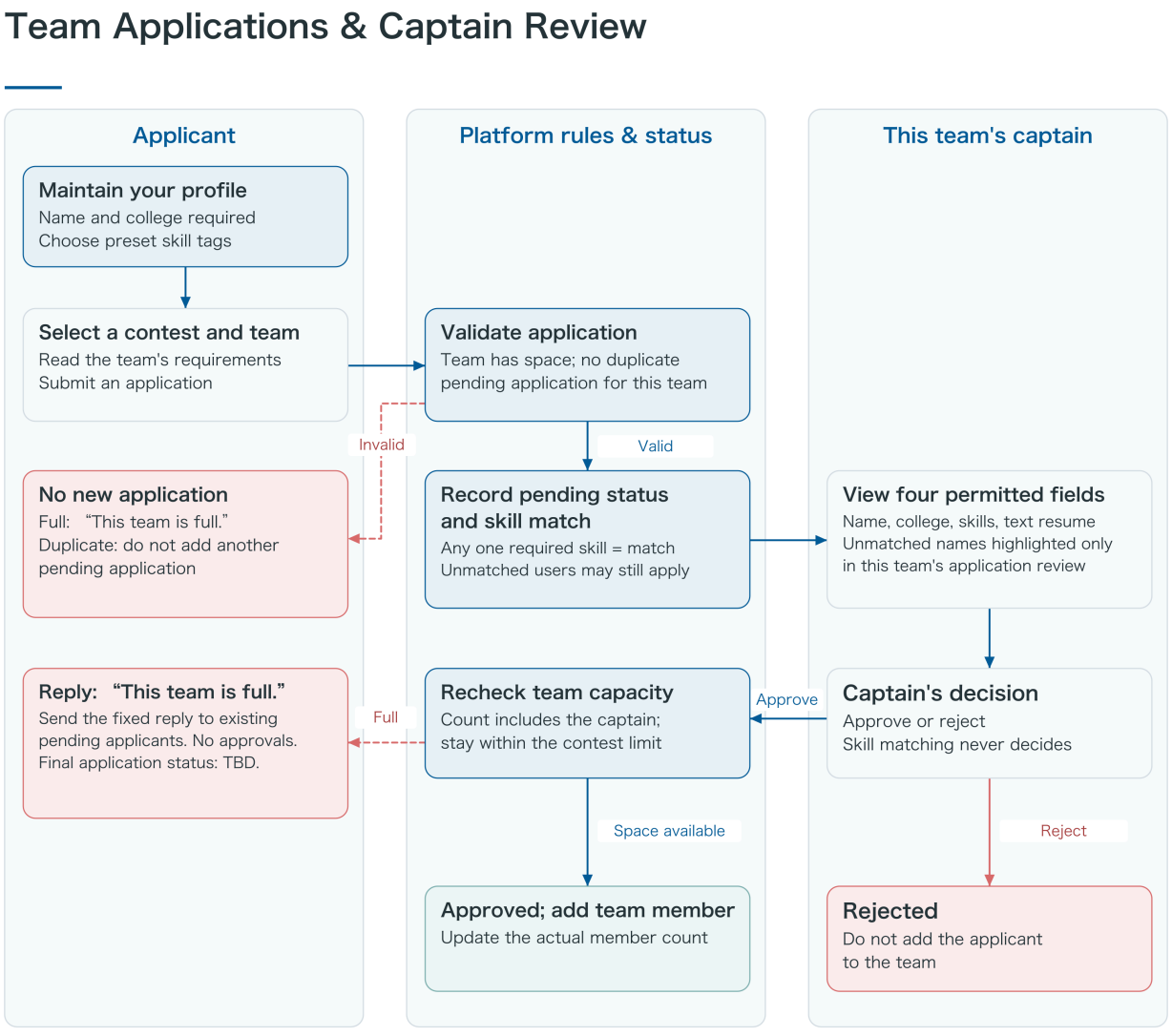
Identifier	Rule	Related Requirements
BR-02	Name and college are required in student profiles	FR-02
BR-03	Users may maintain their own profiles; during review, the corresponding Team Captain may view only name, college, skills, and a short textual resume; other students cannot view the profile	FR-02, FR-10
BR-04	Skill tags are predefined and support multiple selections; custom tags are not supported in the first version	FR-03
BR-05	At least one overlapping required skill is sufficient to match; gender and MBTI are excluded from default matching; non-matching students may still apply, with their names highlighted in the Team Captain's review list	FR-08, FR-09, FR-10
BR-06	The Team Captain sets a maximum total team size, including the Team Captain, that must not exceed the competition's prescribed limit	FR-07, FR-11
BR-07	Multiple teams may exist under the same competition	FR-05, FR-07
BR-08	Applicants actively apply to join a team; the Team Captain approves or rejects them, and approved applicants become members	FR-09, FR-10
BR-09	A user must not repeatedly submit an identical pending application	FR-09
BR-10	Once full, stop accepting new applications and approving admission; provide “This team is full.” to new applicants and existing pending applicants	FR-10, FR-11
BR-11	The first version has no built-in instant messaging; both parties communicate through contact information they voluntarily provide	FR-08, FR-10

6.2 Team-Application Statuses

Current Status	Trigger	Result
No identical pending application exists	The applicant submits a valid application	Pending Review
Pending Review	The team's own Team Captain approves while the team is not full	Approved; the applicant is added to the member records

Current Status	Trigger	Result
Pending Review	The team's own Team Captain rejects	Rejected; no member is added
Pending Review	The same user resubmits the same application	No second pending application is created

When a team is full, new applications cannot be submitted. Existing pending applicants receive the fixed reply “This team is full.” and cannot be approved for admission. This reply does not automatically mean “Rejected.” The final state transitions of existing applications, withdrawal, and reapplication after rejection still require refinement.



Caption: Students actively apply, the platform checks duplicate applications and capacity, and the Team Captain decides admission; non-matching students may still apply, and full-team feedback does not automatically mean rejection.

6.3 Proposed Business Data Objects

The following table organizes business information and relationships for requirements review. Specific fields, storage solutions, and physical database design will be determined later.

Data Object	Currently Involved Information and Relationships
Accounts and Student Profiles	Accounts associated with their owners' information; name, college, skill tags, short textual resume, and other profile fields; permissions for fields visible during review
Skill Tags	Predefined tags associated with student skills and team skill requirements
Competitions	Introduction, dates, participation requirements, official sources, size limits, and corresponding communities
Teams and Members	Team name, competition, Team Captain, total size limit including the Team Captain, skill requirements, introduction, and members
Team Applications	Applicant, target team, application status, and review result
Community Content	Associated competition, discussions, recruitment information, experience, resources, and comments; categories and rules are pending confirmation
Team Collaboration Records	Planned tasks, milestones, progress, and deliverable materials
Campus Activities and Personal Records	Planned activities, registrations, bookmarks, applications, teams, and notifications

Profiles are not public to other students. During application review, the corresponding Team Captain may view only name, college, skills, and a short textual resume. Other profile fields are not displayed to the Team Captain. Access permissions after review, retention periods, and administrator exceptions still require refinement.

7 External Interfaces and Dependencies

- **User Interface**: Use a WeChat Mini Program, with overall pages organized according to Section 4.2; product prototypes and technology choices are maintained in the design documentation.
- **Competition Information Dependencies**: Competition introductions, dates, rules, official sources, and size limits must be obtained. Sources and maintenance methods are pending confirmation; official data integration or scraping is not assumed to have already taken place.

- **Skill-Matching Dependencies**: Use shared predefined tags and the rule that any one overlapping tag is sufficient to match; no complex AI service is required.
- **Contact Channels**: The first version does not provide instant messaging and uses external contact information voluntarily provided by both parties. Entry points, visibility permissions, and the timing of exchange are pending confirmation.
- **Design Coordination**: Specific API paths, database types, development frameworks, and deployment and storage service choices are maintained in the design documentation. Compatibility, performance, and backup requirements belong in Section 8; planned deliverable file-management rules are covered by TBD-10.

8 Nonfunctional Requirements

Apart from the confirmed profile privacy principle, the following are proposed requirements added for requirements review. The team must confirm their specific test conditions and numerical targets. They are not capabilities already implemented or standards specified by the instructor.

Identifier	Aspect	Requirement and Proposed Acceptance Method	Status
NFR-01	Profile Privacy	Users may maintain their own profiles; during review, the corresponding Team Captain may view only name, college, skills, and a short textual resume. Other students cannot obtain the profile through pages or direct requests, and the Team Captain's review queries do not return other profile fields; permissions after review will be confirmed separately	The principle and fields visible during review have been confirmed; access checks are proposed acceptance methods
NFR-02	Operating Permissions	Check identity and permissions when editing personal information, reviewing applications to one's own team, and performing administration; verify that operations do not take effect when attempted with unauthorized accounts	Proposed; the permission matrix requires refinement
NFR-03	Business Consistency	Repeated submission must not create duplicate pending applications; admission approval must remain consistent with application status; clear rules for	Basic business behavior confirmed; concurrency

Identifier	Aspect	Requirement and Proposed Acceptance Method	Status
		capacity handling under concurrency must be established and checked through acceptance	details pending confirmation
NFR-04	Operation Feedback	Success, failure, and status changes for saving, applying, and reviewing should be clearly visible; a failed operation must not display a completed result	Proposed
NFR-05	Usability and Compatibility	Complete the core flow within the WeChat client versions and device screen sizes confirmed by the team; text, forms, buttons, and statuses must be readable and operable	Proposed; supported range pending determination
NFR-06	Performance and Reliability	Establish and verify requirements for core-operation response, simultaneous usage scale, error recovery, and backups after the target environment is determined	Proposed; no unsupported response-time, concurrency, or availability figures are set at this stage

Identity authentication and permission constraints are reviewed according to FR-01, NFR-01, and NFR-02; the design documentation defines the specific technical measures. Compatibility coverage, performance targets, and backup requirements are confirmed during requirements review; see TBD-11.

9 Acceptance and Requirements Traceability

9.1 P0 Core-Flow Acceptance

1. Register or log in according to the final account rules, and enter name, college, and skill tags.
2. Browse or search for a competition, and enter its corresponding details and competition-specific community.
3. A Team Captain creates a team under that competition, setting its total size, including the Team Captain and not exceeding the competition limit, and its skill requirements.
4. Verify the matching rule that any one overlapping skill is sufficient, and that gender and MBTI do not affect matching; non-matching students may also apply, with their names highlighted in the Team Captain's review list.

5. A student submits an application, and the page displays “Pending Review”; repeated submission does not add an identical pending application.
6. During review, the team's own Team Captain may view only the applicant's name, college, skills, and short textual resume; other profile fields are not displayed, and other students and unrelated Team Captains cannot view the profile.
7. When the team is not full, the Team Captain may approve matching or non-matching applicants; approval displays “Approved” and adds the applicant to the team, while rejection displays “Rejected” and does not add a member.
8. Set up a full team whose size includes the Team Captain, and verify that new applications and admission approvals are no longer possible, and that users making new applications and existing pending applicants can see “This team is full.”
9. Check that the first version does not include custom skill tags, complex AI recommendations, or instant messaging.

9.2 Requirements and Acceptance Traceability

Acceptance Topic	Requirement Identifiers	Acceptance Basis
Accounts and Personal Information	FR-01, FR-02, FR-16	Account ownership, required name and college, user operations on their own information, and profile visibility
Predefined Tags and Simple Matching	FR-03, FR-08, FR-09	Multiple selections of predefined tags, any one overlapping skill, exclusion of gender and MBTI, and applications with name highlighting for non-matching students
Competitions and Communities	FR-04, FR-05, FR-06	Corresponding competition entry points and association of related information and content
Team Creation and Size	FR-07, FR-10, FR-11	Total size including the Team Captain, competition size-limit constraints, stopping application acceptance and approvals when full, and the fixed full-team reply
Applications and Admission	FR-09, FR-10	Three statuses, deduplication, Team Captain review, and membership results
Subsequent Planned Functions	FR-12, FR-13, FR-14, FR-15	Acceptance according to the scope and rules confirmed for each version
Nonfunctional Constraints	NFR-01 to NFR-06	Permissions, privacy, consistency, feedback, and operating targets after confirmation

9.3 Version Delivery and Changes

Project milestones follow M0 to M5 in Section 3.7 of the blog: team formation and topic selection, requirements confirmation, design and task breakdown, P0 core version, P1 improvements and validation, and final delivery. This specification maintains each version's functional scope and acceptance criteria; specific dates and task assignments are maintained in the blog's project plan.

Requirements changes should record the requirement identifier, change, reason, impact scope, and confirmation result, and be reflected in the blog, requirements specification, and subsequent acceptance criteria. Estimated workload, the performance assessment system, and actual contribution records are maintained in the blog and are not platform functional requirements.

Before confirming the first-version requirements baseline, unresolved issues affecting P0 behavior and acceptance must be resolved. Subsequent planned functions are confirmed during review of the corresponding version. Review results should be incorporated into the related FR, BR, NFR, and acceptance criteria, with version changes recorded.

10 References

1. Original Assignment 2 Post: requires the requirements specification as a blog attachment, without specifying PDF, Word, or a dedicated template.
2. Assignment 2 Blog Source Draft: project proposal, organizational responsibilities, and current business rules.
3. Official Companion Repository for The Method of Construction, Fourth Edition.
4. Chapter 8: Requirements Analysis in the Official Companion Materials.

Appendix A: Unresolved Requirements and Review Records

This appendix records only unresolved requirements affecting product behavior, scope, and acceptance. Review coordination groups are identified according to the existing work-group responsibilities in the blog to organize the relevant discussions. Confirmed results are incorporated into the corresponding requirements and acceptance criteria, and the status in this table is updated.

Technology frameworks, databases, specific deployment services, and capacity-protection implementations are maintained in the design documentation. Stage dates and task assignments are maintained in the blog's project plan. Evidence status for user research, competitive analysis, and product-trial validation is covered in Section 2.3.

Appendix A: Unresolved Requirements and Review Records (continued)

Identifier	Unresolved Requirement	Related Requirements and Impact	Review Coordination Group	Confirmation Stage	Status
TBD-01	Handling missing competition size limits and rules for changing a team's size limit	FR-07, FR-11; affects team creation and capacity validation	Product Design and Testing Group	M1 requirements review	Unresolved
TBD-02	Final statuses of existing applications after full-team feedback, business outcomes of reviewing multiple applications concurrently, and conditions for reopening recruitment	FR-10, FR-11, NFR-03; affects review results and consistency of member counts	Backend Development Group	M1 requirements review	Unresolved
TBD-03	Required fields beyond name and college, textual resume length, permissions after review, and administrator exceptions	FR-02, FR-10, NFR-01, NFR-02; affects form validation and profile access acceptance	Product Design and Testing Group	M1 requirements review	Unresolved
TBD-04	Matching-result sorting, communication entry points, and when contact information is exchanged	FR-08, FR-09, FR-10; affects matching displays and communication boundaries	Product Design and Testing Group	M1 requirements review	Unresolved
TBD-05	Version scope and rules for application withdrawal, reapplication after rejection, simultaneous applications to multiple teams, member withdrawal, and team dissolution	FR-09, FR-10, FR-12; affects application and member statuses	Product Design and Testing Group	Confirm first-version boundaries in M1; confirm extensions before inclusion in a version	Unresolved
TBD-06	Sources, maintenance responsibilities, sources of size limits, and handling of outdated competition and campus activity data	FR-04, FR-05, FR-07, FR-15; affects information validity	Product Design and Testing Group	Competition content in M1; activity content before inclusion in a version	Unresolved

Appendix A: Unresolved Requirements and Review Records (continued)

Identifier	Unresolved Requirement	Related Requirements and Impact	Review Coordination Group	Confirmation Stage	Status
TBD-07	Community categories, posting, commenting, and review permissions, resource-sharing formats, and recruitment-post associations	FR-06, FR-14; affects publishing and content management	Product Design and Testing Group	P0 posting rules in M1; dashboard extensions before inclusion in a version	Unresolved
TBD-08	Required registration fields, account verification, access without logging in, account recovery, and the specific permission matrix	FR-01, NFR-02; affects account and permission acceptance	Backend Development Group	M1 requirements review	Unresolved
TBD-09	Page-level details in P0, the predefined tag list and how it is updated, and the final functional scope of P1 / P2	FR-03, FR-04, FR-16 and Section 4; affects delivery boundaries	Product Design and Testing Group	P0 in M1; P1 / P2 before inclusion in a version	Unresolved
TBD-10	Business rules for notifications, the team workspace, deliverable file management, and activity registration	FR-12 to FR-15; affects acceptance of subsequent versions	Product Design and Testing Group	Before development of the corresponding version	Unresolved
TBD-11	WeChat client and device compatibility coverage, core-operation performance targets, error recovery, and backup requirements	NFR-05, NFR-06; affects operating and acceptance conditions	Engineering Operations and Testing Group	M1 requirements review	Unresolved

Unresolved items are used for requirements review and PPT preparation and do not yet serve as confirmed implementation or acceptance criteria. After review, incorporate the confirmed conclusions from this appendix into the related requirements and acceptance criteria, and update the item statuses.