UniiLanguage

IMCAT

Risk Analysis (Final)

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Introduction

IMCAT anticipates that our team will encounter various risks throughout our project timeline. We have conducted a risk analysis in order to analyze and find solutions to potential risks that may occur throughout the course of the project.

Persistent Risks

Risk: Delay due to team/client illnesses/emergencies
Urgency: High
Description: Due to the current pandemic situation as well as other unexpected emergencies, there may be delays in the development of the application.
Mitigation: Emergencies will be communicated with the team and client. Team members will accommodate for the affected person and update them on the progress related to the application once they have recovered fully.

Risk: Environmental disasters
Urgency: Medium
Description: This is concerning the pandemic, as well as other natural/environmental disasters that may unexpectedly occur during the course of this project including earthquakes and wildfires.
Mitigation: Team members will communicate about their emergency situations, and unaffected members shall accommodate for affected members.

Risk: Productivity dropoff as project progresses
Urgency: High
Description: Over the course of the development of the application, team members may lose motivation and perform less adequately in terms of productivity during the development of the application.
Mitigation: Clear deadlines and expectations will be set. Clear communication will be prioritized with the team if other external issues arise and seek assistance.

Risk: Spontaneous requirements alteration from client
Urgency: High
Description: As we're assisting the client build and develop her application, there may be some last minute changes from the client that would require us to alternate or even scrap some parts of the project.
Mitigation: Regular meetings will be scheduled with the client to ensure that we have the same mental model of the application, its features, and the direction in which the application is heading.

Planning

Risk: Lack of clear and concrete functional requirements from client
Urgency: High
Description: There may be vague and inaccurate interpretations of the conceptual requirements from the client.
Mitigation: There shall be weekly meetings between the client and the team members in which the team discusses their mental model and current understanding of the system and list any concerns or confusion they may have.

Risk: Inconsistent project vision amongst client, team, and/or stakeholders
Urgency: High
Description: Having different visions of the project between the development team and the stakeholders and possibly creating a project with inconsistency.
Mitigation: Consistent synchronization meetings will be held twice per week to ensure consensus between all involved parties.

Risk: Proposed requirements do not satisfy stakeholder expectations
Urgency: High
Description: The requirements we give to the stakeholder does not satisfy her expectations and possibly want a different expectations so they can be satisfied.
Mitigation: Stakeholder expectations will be formalized and iteratively redescribed to the client to ensure that the formalized requirements accurately reflect client interests.

Design

Risk: Low fidelity prototypes fail to meet client satisfaction
Urgency: High
Description: The creation of the low fidelity prototypes does not satisfy the clients satisfaction and possibly have to create a new low fidelity prototype to satisfy the clients.
Mitigation: Prototype generation will be lightweight, iterative, and created in the presence of the stakeholder.

Risk: Design progress fails to meet project velocity goals
Urgency: Medium
Description: The design process is taking longer than expected and the whole project will be delayed due to that reason.
Mitigation: Prioritizations will be made to ensure that minimum viable product requirements are being delivered even in low velocity environments.

Risk: User data does not reach saturation; cannot gather concrete findings from user data
Urgency: Medium
Description: From conducting user data research, we are not able to find any important information about the designs we created.
Mitigation: Preliminary research goals will be set at lower quantities of users to ensure that as much information as possible is still gained from the existing information.

Risk: Insufficient number of participants for usability tests, interviews, etc.
Urgency: Medium
Description: Not enough participants can be found or are readily available for sufficient data collection and required research methods.
Mitigation: New methods for participant outreach, such as reaching out to community groups of target audience OR restructuring user research to depend less on participant data and findings, will be used.

Risk: Cognitive walkthroughs reveals an unacceptably difficult user experience
Urgency: High
Description: User feedback from cognitive walkthrough reveals urgent user experience/usability issue that halts design process or overall project from proceeding.
Mitigation: Source(s) of usability issue(s) will be located, reassessed, and redesigned immediately. Parallelizable tasks will be allocated to other teams/team members, if any. Appropriate user research will be conducted to determine whether issues have been adequately addressed.

Risk: Accessibility tradeoffs presented upon design elaboration
Urgency: Medium
Description: Sponsor/stakeholder/team capabilities/environment insists on design requirements which directly compromise the system's accessibility.
Mitigation: Accessibility requirements will be communicated. Reassessments will be made on how proposed inaccessible requirements can be made more accessible, or similar alternatives which do not compromise accessibility will be proposed, to ensure that all requirements and edits comply with WCAG 2.1 A or AA accessibility standards.

Risk: Interdepartmental disagreement regarding design direction throughout design process
Urgency: Medium
Description: Team members disagree broadly on overall design choices or design direction being made at any point throughout the design process.
Mitigation: Time will be allocated for individual team members to communicate one another's understandings of the current design so as to re-center design ideas. Attempts will be repeated to come to a common consensus of design direction. Compromises will be made when possible.

Risk: Design requirements exceed developer capabilities
Urgency: High
Description: Design requirements insist on features/functionalities which are not technically possible, or exceed developer capabilities or project scope.
Mitigation: Time will be allocated to communicate design/development incongruencies immediately. Design requirements will be reassessed and rewritetten as needed to better fit develop capabilities and/or project scope.

Development

Risk: Insufficient team breadth during development
Urgency: High
Description: Lack of team knowledge during development may result in an inability to reach all design goals.
Mitigation: Viability considerations will be made during the requirements phase. If a critical requirement cannot be achieved due to a lack of team knowledge, then requirements will be adjusted to maintain the project's overarching goals and values even without said requirement.

Risk: Development progress fails to meet project velocity goals
Urgency: Medium
Description: Development may stall due to unforeseen delays and/or difficulties, resulting in a project timeline that is behind schedule.
Mitigation: Weekly meetings will be held to discuss progress, evaluate priorities, and assign responsibilities in order to ensure that high-priority targets continue moving on pace.

Risk: Integration fails due to interdepartmental miscommunication
Urgency: Medium
Description: Interdepartmental miscommunication regarding requirements may lead to independently developed modules failing to integrate correctly, stalling progress.
Mitigation: Interdepartmental communication will be emphasized, and a significant amount of development time will be dedicated to requirements synchronization before individual development. In addition, weekly meetings will be used to compare progress and ensure the continued possibility of future integration.

Risk: Testing reveals unanticipated problems with long correction times
Urgency: High
Description: Testing may reveal that there exist problems that are too difficult to adequately address in the allocated time frame.

Mitigation: Viability considerations will be made during the requirements phase, and flexibility will be maintained with the client to ensure that the client will still be satisfied if a number of requirements cannot be met.

Execution

Risk: Dependent software compatibility settings are altered
Urgency: Low
Description: Software dependencies may alter their compatibility settings, breaking certain aspects of the product.
Mitigation: Software dependencies will be limited, and chosen from libraries with a history of backwards compatibility. In addition, in the event of an unavoidable compatibility conflict, the product will be adjusted to meet requirement goals.

Risk: Unanticipated competition outperforms product, reducing product need
Urgency: Low
Description: Competing apps may develop before the launch of this project, resulting in a diminished need for the product in development.
Mitigation: A thorough business case will be conducted to account for existing applications, and the client will be consulted regarding remaining viable use cases.

Risk: Unanticipated bugs not covered in testing breaks production server
Urgency: High
Description: Unanticipated bugs may significantly affect the product during production due to insufficient preventative testing.
Mitigation: Testing will be conducted iteratively and as thoroughly as possible, with frequent user-side tests and walkthroughs.

Risk: The product fails to meet user retention goals
Urgency: Low

Description: Due to a lack of foresight, misguided product vision, or failure to accurately access the existing market's needs and priorities, the finished product may fail to reach user retention goals, and quickly become outmoded.
Mitigation: Priority reassessments will be carried out throughout development, and frequent user testing will be conducted at all stages of development.

Maintenance

Risk: Product is not feasible/sustainable to maintain for sponsor
Urgency: Medium
Description: After the 20 week timeline, the sponsor plans to continue use of the product and possibly implement it into a pre-existing online software.
Mitigation: Proper communication with the sponsor will help us design the project so that these future implementations can be easily added.

Risk: Product requires support from IMCAT past 20-week timeline
Urgency: Low
Description: Currently the project is aimed to complete the primary requirements of the working game/learning tool. Many features and future add-ons have been established, so those features are planned to be added later on once the primary program is created. Regardless, the final deliverable will be the basic software with potential features.
Mitigation: Progress transparency will be key in mitigating this risk. Any signs of falling behind on the main project will be a high priority.