**Project Plan**

**Gym Buddies - Workout Buddy Finder**

|  |  |
| --- | --- |
| Industry Partner |  |
| Primary Instructor | Anjana Shag |
| Team Member | Jacob Solano |
| Team Member | Nhu Nam Nguyen |
| Team Member | Ronan Behan |
| Team Member | Duc Thien Tran |
| Team Member | Simon Vu |

Document Revision History

|  |  |
| --- | --- |
| Revision # | Date |
| 1.0 | October 7, 2024 |

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**1. Executive Summary**

|  |  |
| --- | --- |
| Objective | Develop a mobile application called GymBuddies that connects users with compatible workout partners based on fitness goals, schedules, and location preferences. |
| Corporate Goals Addressed | Create innovative software solutions for real-world problems  Enhance user engagement in fitness activities  Foster a community of mutual support and motivation in health and wellness |
| Planned Start Date | September 16, 2024 |
| Planned End Date | March 28, 2025 |

**2. Project Approvers, Reviews and Distribution List**

Approvers, reviewers and distribution list

|  |  |  |  |
| --- | --- | --- | --- |
| Project Role | Name | E-mail | Date |
| Instructor | Anjana Shah | ashah@georgebrown.ca | October 7, 2024 |
| Project Manager | Jacob Solano | 101348583@georgebrown.ca | October 7, 2024 |
| Lead Frontend Developer | Nhu Nam Nguyen | 101441905@georgebrown.ca | October 7, 2024 |
| Lead Backend Developer | Duc Thien Tran | 101333237@georebrown.ca | October 7, 2024 |
| Full Stack Developer | Ronan Behan | 101366894@georgebrown.ca | October 7, 2024 |
| Full Stack Developer | Simon Vu | 101415605@georgebrown.ca | October 7, 2024 |

**3. Scope**

Define the sum total of all of its products and their requirements or features.

|  |  |
| --- | --- |
| In Scope | Out of Scope |
| User registration and profile creation | Integration with fitness tracking devices or other third-party apps |
| Geolocation services for nearby partner and gym suggestions | Implementation of a payment system for premium features |
| Filter-based and swipe-based matching system | Development of a web-based version of the application |
| In-app messaging and communication | Social media integration |
| Workout tracking and challenges | Creation of content such as workout plans or nutritional advice |
| User verification and reporting system |  |
| Integration with Google Maps for gym locations |  |
| Backend infrastructure and database management |  |
| iOS and Android mobile application development |  |

**4. Deliverables**

This project will deliver the following.

|  |  |
| --- | --- |
| Deliverable | Description |
| Mobile Application | Fully functional GymBuddies app for iOS and Android platforms |
| Backend Infrastructure | Server infrastructure to support user data management, matching algorithm, and API services |
| Documentation | Comprehensive documentation including user manuals, API documentation, and system architecture diagrams |
| Final Presentation | Presentation and demo of the application, showcasing key features and potential for scalability |

**5. Assumptions**

This project makes the following assumptions:

* Resources will be available to host the application
* The app will be created using Android Studio with the latest SDK for Android and Swift for iOS
* All planned features of the app can be implemented within the project timeframe
* The project will be able to attain its current scope
* The application will allow seamless integration of users
* Google Maps will be used for integrating location services
* The app will comply with PIPEDA privacy regulations

**6. Dependencies**

The following are the internal and external dependencies that will have to be acknowledged and addressed:

* Availability of Google Maps API for location services
* Access to cloud services (Firebase) for backend infrastructure
* Approval and compliance with app store guidelines (Google Play Store and Apple App Store)
* Collaboration with ad agencies for in-app advertisement integration

**7. Risk Management**

|  |  |  |  |
| --- | --- | --- | --- |
| Potential Risk | Severity (H/M/L) | Likelihood (H/M/L) | Management Strategy |
| User safety concerns | H | M | Implement robust verification and reporting systems.  Provide safety guidelines |
| Privacy regulation non-compliance | H | L | Regularly review and update privacy policies |
| Low initial user adoption | H | H | Develop a strong marketing strategy  Offer incentives for early adopters |
| Technical issues/bugs | M | M | Implement thorough testing procedures  Establish a quick response system for bug fixes |
| Scalability challenges | M | L | Design the backend infrastructure for scalability from the start |

**8. Communication**

**Reporting**

The following reports will be produced:

|  |  |  |
| --- | --- | --- |
| Report | Audience | Frequency |
| Progress Report | Team Members, Anjana Shah | Weekly (During Class) |
| Sprint Review | Team Members, Anjana Shah | End of each Sprint |

**Meetings**

The following meetings/communication will be established;

|  |  |  |  |
| --- | --- | --- | --- |
| Meeting | Purpose | Attendees | Frequency |
| Minutes of Meeting | Plan Sprint Deliverables | Team Members | Every 3 days |

**9. Task Listing (WBS- Work Breakdown Structure)**

|  |  |  |  |
| --- | --- | --- | --- |
| Reference | Tasks | Duration | Dependency |
| **A** | **Sprint 1** | **2 Weeks** | - |
| A.1 | Project Vision |  | **A** |
| A.2 | Business Requirements |  | A.1 |
| A.3 | Personas |  | A.2 |
| A.4 | User Stories |  | A.3 |
| **B** | **Sprint 2** | **3 Weeks** | **A** |
| B.1 | Project Plan |  | **A** |
| B.2 | Team Charter |  | B.1 |
| B.3 | Product Backlog |  | B.2 |
| B.4 | Sprint Backlog |  | B.3 |
| B.5 | Preparation and Class Presentation |  | **A, B** |
| **C** | **Sprint 3** | **3 Weeks** | **B** |
| C.1 | System Requirements Gathering |  | C |
| C.2 | Analysis and Design |  | C.1 |
| **D** | **Sprint 4** | **4 Weeks** | **C** |
| D.1 | Wireframes/Prototype |  | **C** |
| D.2 | Technical Requirements |  | D.1 |
| E | **Backend Development** | **3 Weeks** | **D** |
| E.1 | Set up cloud infrastructure (Firebase) |  | **D** |
| E.2 | Develop user authentication system |  | E.1 |
| E.3 | Create API for user profile management |  | E.2 |
| E.4 | Implement matching system |  | E.3 |
| E.5 | Implement API for geolocation services |  | E.4 |
| E.6 | Implement ad serving API |  | E.5 |
| F | **Frontend Development (iOS)** | **4 Weeks** | **D** |
| F.1 | Implement user registration and login |  | **D** |
| F.2 | Create user profile management interface |  | F.1 |
| F.3 | Develop match finding and filtering interface |  | F.2 |
| F.4 | Implement in-app messaging system |  | F.3 |
| F.5 | Create workout tracking and challenge features |  | F.4 |
| F.6 | Implement user verification system |  | F.5 |
| F.7 | Integrate geolocation services |  | F.6, E.5 |
| F.8 | Implement ad display system |  | F.7 |
| G | **Frontend Development (Android)** | **4 Weeks** | **D** |
| G.1 | Implement user registration and login |  | **D** |
| G.2 | Create user profile management interface |  | G.1 |
| G.3 | Develop match finding and filtering interface |  | G.2 |
| G.4 | Implement in-app messaging system |  | G.3 |
| G.5 | Create workout tracking and challenge features |  | G.4 |
| G.6 | Implement user verification system |  | G.5 |
| G.7 | Integrate geolocation services |  | G.6, E.5 |
| G.8 | Implement ad display system |  | G.7 |
| H | **Integration and Testing** | **4 Weeks** | **E, F, G** |
| H.1 | Integrate backend with iOS frontend |  | **E, F** |
| H.2 | Integrate backend with Android frontend |  | **E, G** |
| H.3 | Develop reporting and safety features |  | H.2 |
| H.4 | Test and optimize ad system |  | H.3 |
| I | **Quality Assurance and Bug Fixing** | **2 Weeks** | **H** |
| I.1 | Conduct thorough testing of all features |  | **H** |
| I.2 | Fix identified bugs and issues |  | H.1 |
| J | **Documentation and Finalization** | **1 Week** | **I** |
| J.1 | Create user manuals |  | **I** |
| J.2 | Prepare API documentation |  | **I** |
| J.3 | Finalize system architecture diagrams |  | **I** |
| K | **App Store Submission** | **1 Day** | **J** |
| K.1 | Prepare submission for iOS App Store |  | **J** |
| K.2 | Prepare submission for Google Play Store |  | **J** |

**10. Budget**

* The project would utilize the free version of the Firebase and the free version of the Google Maps API to implement the features of the app during its developmental cycle.
* Google Maps API provides $200 worth of free credits every month. The first 100,000 requests would cost $32 per 1000 requests. This leads to 6,250 worth of free requests a month.
* The quota for free Firebase users consist of:
  + Stored data - 1 GiB
  + Document reads - 50,000 per day
  + Document writes - 20,000 per day
  + Document deletes - 20,000 per day
  + Outbound data transfer - 10 GiB per month
* The team members would utilize caching strategies to limit API calls and optimize database and queries to take advantage of the free tiers provided by Firebase and Google Maps API

**11. Milestones**

|  |  |  |
| --- | --- | --- |
| Major Activity or Milestone | Estimated Milestone Target date | Owner/Reviewer Team Members |
| Project Kickoff | September 16, 2024 | Team Members |
| Sprint 1 Completion | September 29, 2024 | Team Members |
| Sprint 2 Completion | October 7, 2024 | Team Members |
| Sprint 3 Completion | November 18, 2024 | Team Members |
| Sprint 4 Completion | December 20, 2024 | Team Members |
| Backend MVP | Januray 21, 2025 | Duc Thien Tran, Nhu Nam Nguyen |
| Frontend MVP (iOS and Android) | January 28, 2025 | Ronan Behan, Simon Vu |
| Integration Complete | Februrary 25, 2025 | Team Members |
| Debugging Complete | March 11, 2025 | Team Members |
| Documentation Complete | March 18, 2025 | Team Members |
| App Store Submission | March 20, 2025 | Jacob Solano |
| Project Completion | March 28, 2025 | Team Members |

**12. Approval**

The signatures below indicate their approval of the contents of this document.

|  |  |  |  |
| --- | --- | --- | --- |
| Project Role | Name | Signature | Date |
| Project Manager | Jacob Solano | Jacob Solano | October 7, 2024 |
| Lead Frontend Developer | Nhu Nam Nguyen | Nhu Nam Nguyen | October 7, 2024 |
| Lead Backend Developer | Duc Thien Tran | Thien Tran | October 7, 2024 |
| Full Stack Developer | Ronan Behan | Ronan Behan | October 7, 2024 |
| Full Stack Developer | Simon Vu | Simon Vu | October 7, 2024 |