TEAM DELTA  
Project Plan

Team Members:

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**1. Introduction**

This document will provide detailed information on Group Delta’s project plan, which will explain the goal of the team’s project, how those goals will be achieved, and a timeline for reaching said goals. The following information can be found in the project plan: Statement of Work, Resource List, Roles, Requirements, Risks, Schedule, and Communication Plan.

**2. Statement of Work**

A final challenge for completing UMGC’s capstone Computer Science course includes completing a group project that results in a finished product. Team Delta’s finished product will be an Android widget application focused on digital wellness, specifically aimed at reducing unnecessary phone usage. This app is intended to be used by people who recognize excessive phone usage is not healthy and would like to restrict their usage. Users will be able to set limits on daily usage, as well as set a single usage timer to help them break the cycle of scrolling endlessly on their phones.

Key application features:

* Widget accessible from home screen for easy access to current screen time information
* Ability to set a daily usage limit
* Ability to set a session usage limit
* Notification overlay to alert user when usage limit has been reached

The project will be developed using the Kotlin programming language and the Jetpack Glance library for widget development. The final project will be made available via Android application package (APK). The source code will also be hosted in a public GitHub repository.

Project Scope:

* In Scope:
  + Development of an Android widget using Kotlin and Jetpack Glance
  + Compatibility with devices running Android 12 and above
  + Implementation of screen time tracking on a per session and daily basis
  + Design and implementation of user interface
  + Implementation of notification overlay to inform user when limits are reached
  + Creation of user documentation and stakeholder presentation
* Out of scope:
  + Cross-platform compatibility
  + Detailed analytics/reports
  + Automatic app blocking or restricting

Any proposed changes to the scope will be discussed by the entire group prior to implementation.

**3. Resource List**

To create the application, Team Delta will use the following resources:

1. Microsoft Teams for group collaboration and communication
2. Android Studio for the programming environment and phone emulator
3. Personal computers for programming
4. GitHub for version control and code sharing
5. Figma for UI/UX design
6. Personal Android devices for real world testing

**4. Roles**

Each member will fulfill several roles in the team to be sure that the project is completed in the allotted 8-week course. More specific information about the roles can be found below.

|  |  |
| --- | --- |
| **Role** | Programmer |
| **Member** | Kalim Dausuel, Marie Thesia Asamba, Nick Geisler, Eric Moore |
| **Description** | All members will collaboratively assist with programming the functionality of the application. |

|  |  |
| --- | --- |
| **Role** | User Interface Designer |
| **Member** | Kalim Dausuel, Marie Thesia Asamba, Nick Geisler, Eric Moore |
| **Description** | These members are responsible for creating the interface users will interact with. This includes the app itself, the app’s widget that will be available, and the message that appears on screen when the allotted screen-usage time has been reached. |
| **Role** | Tester |
| **Member** | Kalim Dausuel, Marie Thesia Asamba, Nick Geisler, Eric Moore |
| **Description** | All team members are to ensure that each section of the project/application functions as designed. They are also to identify exceptions and gaps in the case scenarios to further develop on the project. All members of the team will write test plans for the part of the project that they are developing. |

**5. Requirements**

Non-functional Requirements:

* The widget will consume less than 15% of the device’s battery over a 24-hour period.
* The widget will update the time left on each usage timer at least every 2 minutes.
* The widget interface will be user friendly, allowing users to access key functions within 5 seconds.
* The widget will be compatible with devices running Android 12 and above.

Functional Requirements:

* The widget will accurately track and display the time left for the user’s usage limits (daily and session).
* Users will be able to set one screen time limit to cover a 24-hour period.
* Users will be able to set one screen time limit to cover a single usage session.
* The application will display a notification that will appear over the currently running app when the user has exceeded either their daily or session usage limit.

**5. Risks**

This section highlights the risks involved with programming an Android application in such a short period with a small team. Recognizing these risks is important when planning for the development of the app and will ensure that we are prepared to put the right amount of effort into avoiding any potential pitfalls the team may encounter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Probability** | **Impact** | **Action** |
| Unfamiliarity with Android Studio | 70% | Not having used this environment can slow down the development of the application as it includes many different features that the programmers and UI Designers will need to be familiar with. | Spend time playing around with the application and make sure that everyone has configured their environment in a similar way to prevent confusion. |
| Unfamiliarity with Application Development | 90% | Not having developed applications before means that team members can be more likely to make common mistakes that more experienced developers might avoid | Program one feature at a time to make sure the feature is functional before moving on to new tasks and use online resources such as Stack Overflow to see what other developers have done in the past to solve similar problems. |
| Team Availability | 100% | Members live in different time zones and therefore communication might be slow or strained. | Each team member has agreed to use MS Teams and check in at least once per day to update on what is being worked on and any challenges impacting the project. |

**6. Schedule**

Below is a chart highlighting the deadlines and expected time frame required to create the application.

|  |  |  |  |
| --- | --- | --- | --- |
| Application Development Timeline |  |  |  |
|  |  |  |  |
| Tasks | Start Date | Duration (Days) | End Date |
| 1. Planning/Design | 06/18/2024 | 14 | 07/02/2024 |
| 1.1 Project Plan | 06/18/2024 | 7 | 06/25/2024 |
| 1.2 Project Design | 06/25/2024 | 7 | 07/02/2024 |
| 2. Coding/Testing | 07/02/2024 | 21 | 07/23/2024 |
| 2.1 Phase 1 | 07/02/2024 | 7 | 07/09/2024 |
| 2.2 Testing | 07/09/2024 | 7 | 07/16/2024 |
| 2.3 Phase 2 | 07/16/2024 | 7 | 07/23/2024 |
| 3. Documentation | 07/23/2024 | 14 | 08/06/2024 |
| 3.1 User Guide | 07/23/2024 | 7 | 07/30/2024 |
| 3.2 Presentation | 07/30/2024 | 7 | 08/06/2024 |

**7. Communication Plan**

Team members will participate in daily asynchronous virtual meetings using Microsoft Teams. All documentation generated will be hosted in the Files section of the Teams chat for reference. All code will be shared through the GitHub repo created for the project.