DESIGN SPECIFICATION DOCUMENT (DSD)

CITY
CYCLERS

JUST FOR FUN

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1.0 INTRODUCTION

1.1 PURPOSE

This document will explain the design of City Cyclers which will be an application on Android and IOS Operating System. It contains information about classes, how the system works, expected input and output.

1.2 SCOPE

This document is used by software engineering as explanation of the “City Cyclers” application design. Application will be run on IOS and Android devices.City cyclers based on the critical mass. It basically has a timeline that show activity of user’s. The user’s will be able to create a new event, delete their own existing event or vote our user’s events. Every event will have map parts that shows the route of the activity and informations about location, time, etc.

1.3 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

Term	Definitions
User	A potential user of the application.
Critical Mass	The number of cyclists has to come to a threshold value for cars to give way to cyclists while the intersection on main streets is turning.
Object-Oriented Programming	It is a programming style which is associated with the concepts like class, object, Inheritance, Encapsulation, Abstraction, Polymorphism.
Project Cost	The price paid to acquire for software project
Risk	What can go wrong and what can done about it on project.

1.4 REFERENCES

https://www.researchgate.net/figure/Functional-Decomposition-Diagram_fig2_325398700
https://www.toptal.com/freelance/why-design-documents-matter

2.0 DESIGN CONSIDERATIONS

2.1 DESIGN ASSUMPTIONS

The users of this software are expected to have basic skills of using an application on a mobile device that runs on Android and IOS Operating System. Naturally, the application is dependent on Android and IOS Operating System.

2.2 DESIGN CONSIDERATIONS

-Operating Environment

The application is intended to be executed on Android and IOS Operating System.

-Fault Tolerant Design

Exceptions will be handled by using general exception handlers of Java, Android and IOS SDK.

-Design Conventions

General Object-Oriented Programming methodology will be used for this application. For developing, “Waterfall Software Development” model is used.

-User Interface

- **Expected Input**

  The user will be prompted to provide data for the following :

  (*Start of app)*
  -*User Type*
  -*User Name*
  (with creating a new event)
  -*Event Name*
  -*Event Details*

- **Output**

  Inputs taken before the start of using app will be used to create an account. The users will be displayed according to the data provided by the user. Inputs taken with creating a new event will determine the all information of event.

2.3 SYSTEM ENVIRONMENT

-Design Method

The design of this application depends on an Object-Oriented Programming approach.

-User Interfaces

There will be different interfaces. First one is main interface, which shall welcome the user and shall let the required operations before the beginning of the application to create an account. It will consist of a background image and required buttons placed on it. The second interface shall be used for timeline to show events. It will consist of a map and events placed on it.

-Hardware Interfaces

The game will run only on mobile devices.

-Software Interfaces

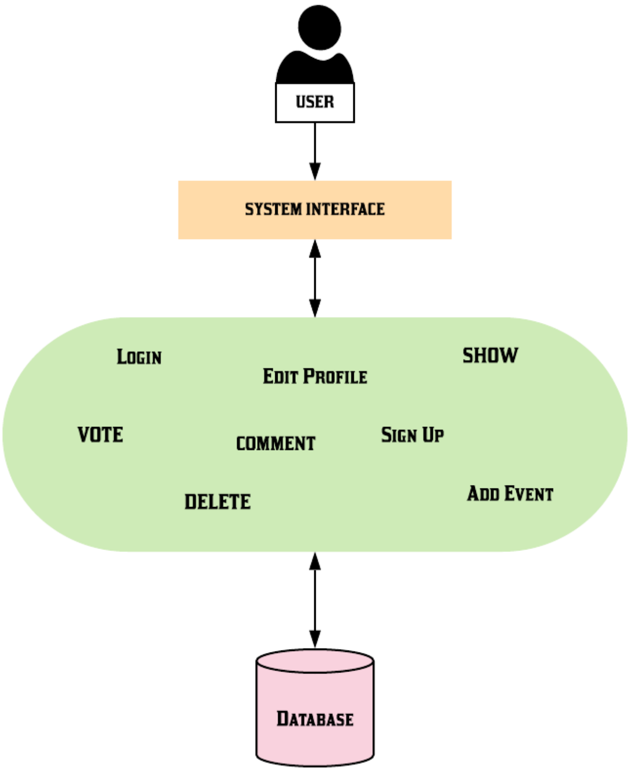
The game will run only on mobile devices those are running on Android and IOS Operating System.

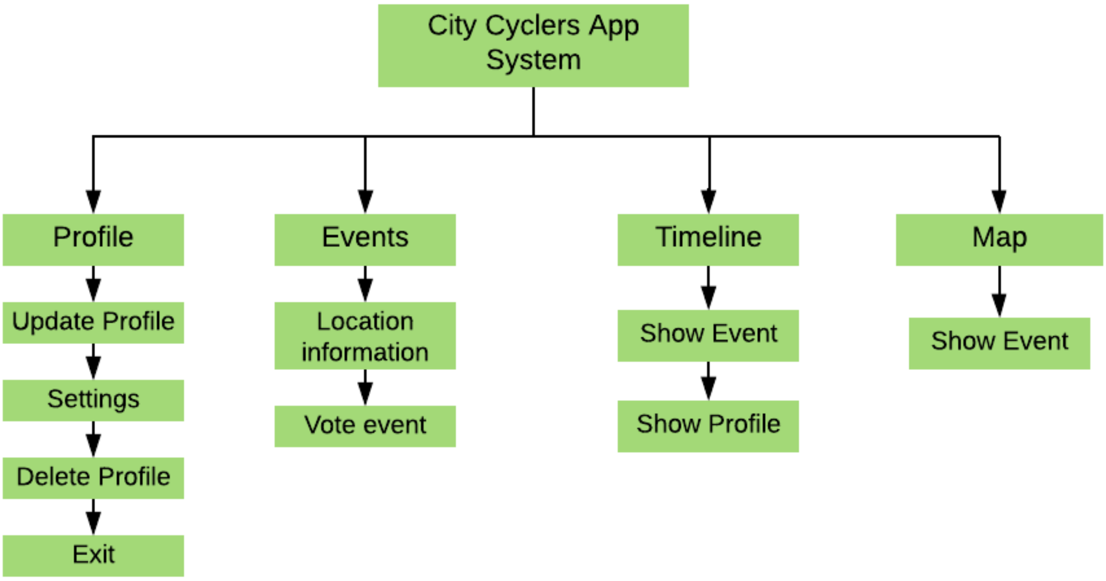
-Constraints

The application can only run on a mobile device that runs on Android and IOS Operating System.

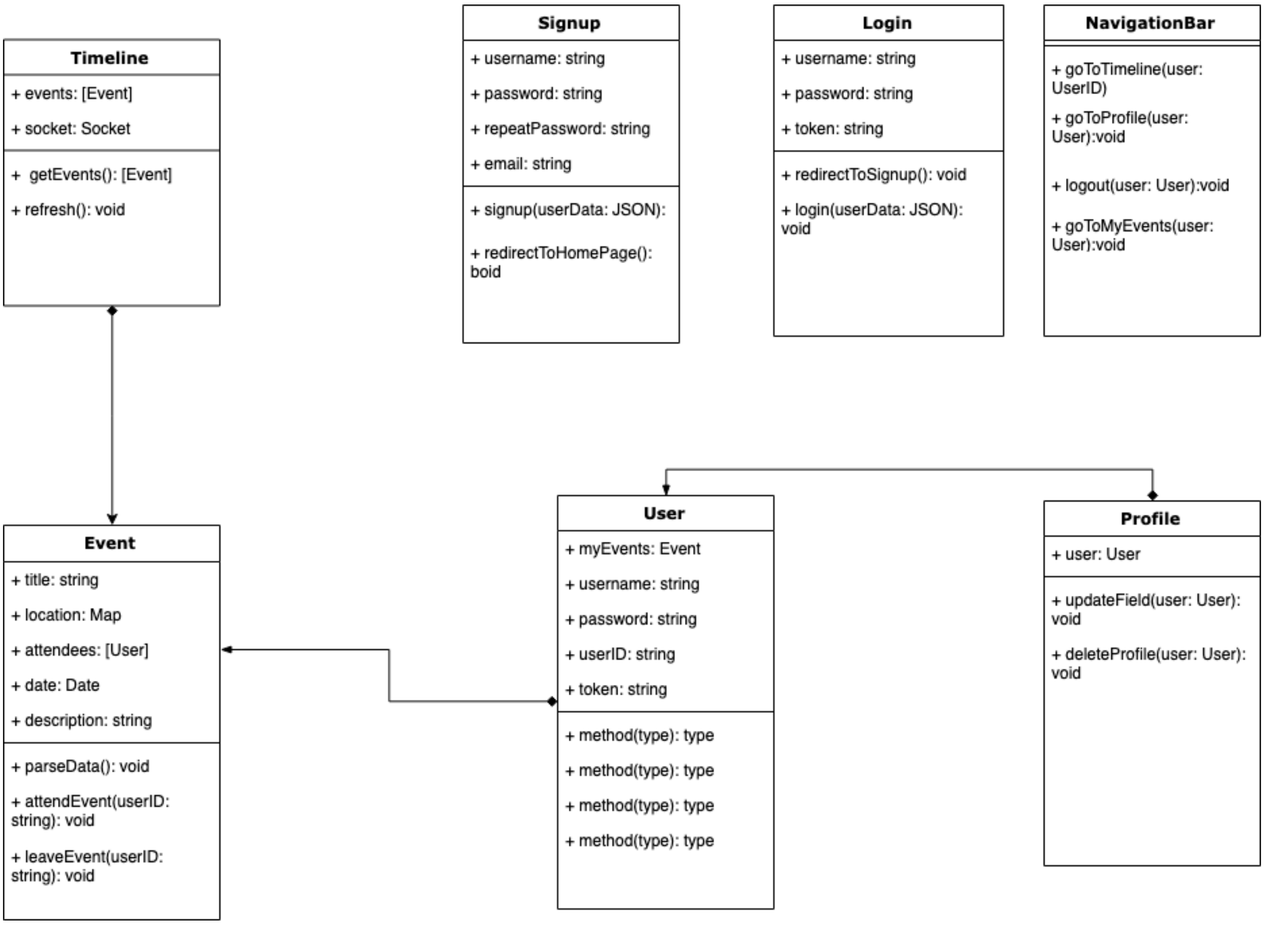
3.0 SYSTEM DESIGN

3.1 ARCHITECTURAL SYSTEM DESIGN





3.2 CLASS DIAGRAM



4.0 CONCLUSION

At the end, this document generally shows how design part of the project works. In the introduction part, we determine basics of the project and explained definitions. In the design consideration part, we basically mentioned about what process model we’ve used, in what devices will the application works and showed that according to input values what will be the outputs. Finally, in the system design part, we have two goals. At the first part, we draw main system representation and system decomposition ; at the second part we draw class diagram of the application to show that how the programming part of the system works.

CREDITS

Introduction Architectural System Design Conclusion	Dilara Bayar
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