System design and development

User requirements

1. The system must capture data in a form of a survey about people's lifestyle preferences.
2. The user will enter their information without the use of logging in.
3. The system must save the data on a cloud database.
4. The system must calculate the results of the survey before displaying them.
5. The system must able to generate statistical data after calculation.

Design

This section describes physical model that will satisfy all requirement for the system and the technical environments used to implement the system. The hardware and software in which the system will operate. The forms, reports of how the system will look like, programs/software and database that will be used.

1. Software
    a. Android studio (Java)
    b. Android OS (target 27 minimum 15)
    c. Database: Backendless cloud API
    d. internet

2. Hardware
    a. Android mobile device
    b. Laptop or computer

Implement and training

This section describes all necessary measures to construct the system and test to ensure that it performs as designed. After the system is tested its user friendliness is simple enough. The applications will run on an android smart phone and save its data on a cloud database. This mobile application will only show statistics output of the survey, user information will be protected.

Technology to use: Android, Backendless Cloud API, Java

Support

This section describes support of the system. The maintenance, enhancement and to protect it. Maintenance changes, correct errors and adapt to changes in the environment. The IT staff ensure that all processes are taken in order for the system to run smoothly.

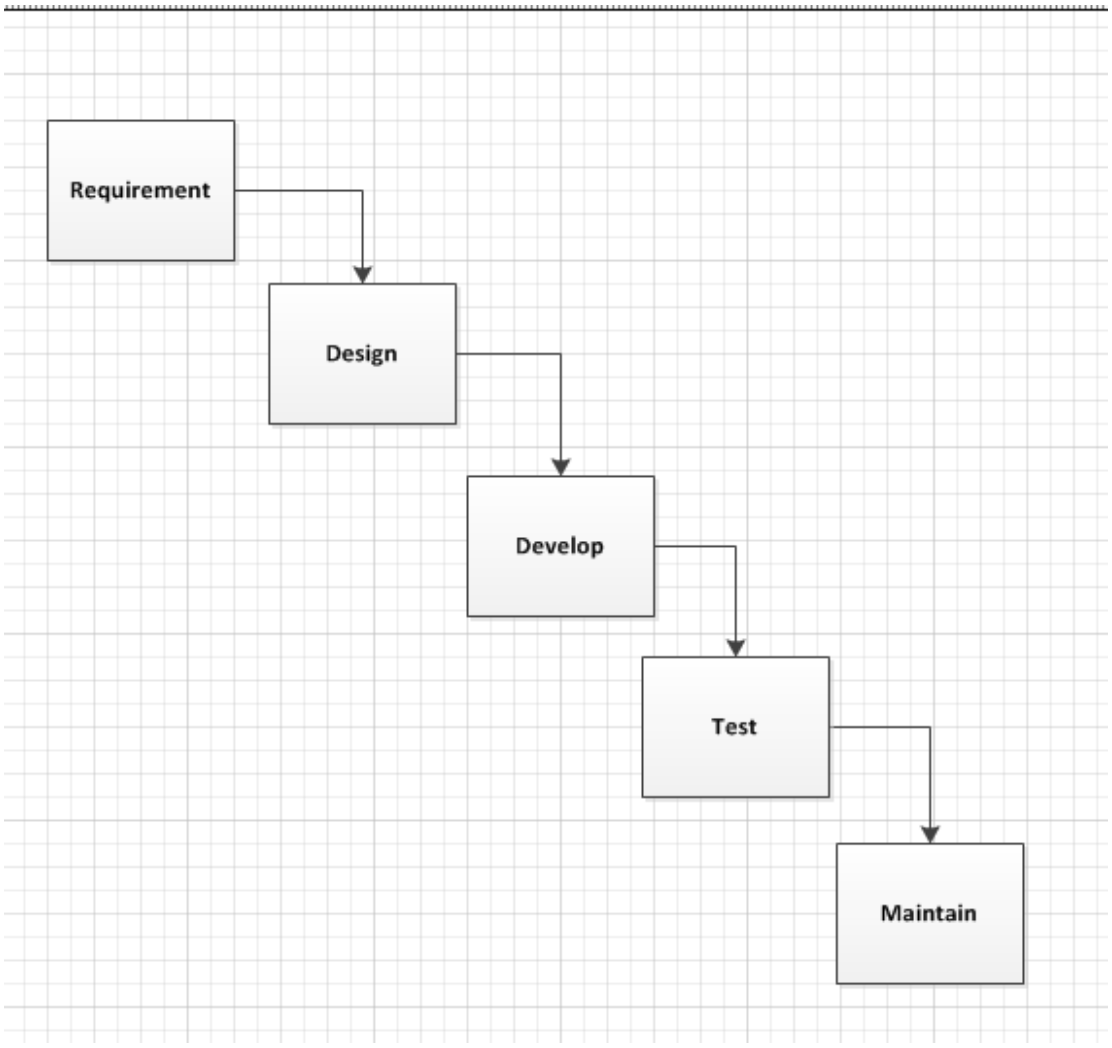
Research results

Introduction

The diagrams created during the study such as waterfall model diagram, uses case diagram and system architecture and user interface of the system. All diagrams will be clearly described in detail and their purpose.

Diagrams

1.1 Waterfall model diagram



1.2 Use case diagram

Use cases diagrams describe what the system needs to do, together with how the users will interact with the system. It is used to understand the functionality of the system and provides a simple way of communicating with users.
Figure 1 present a use case diagram for a user interacting with the system.

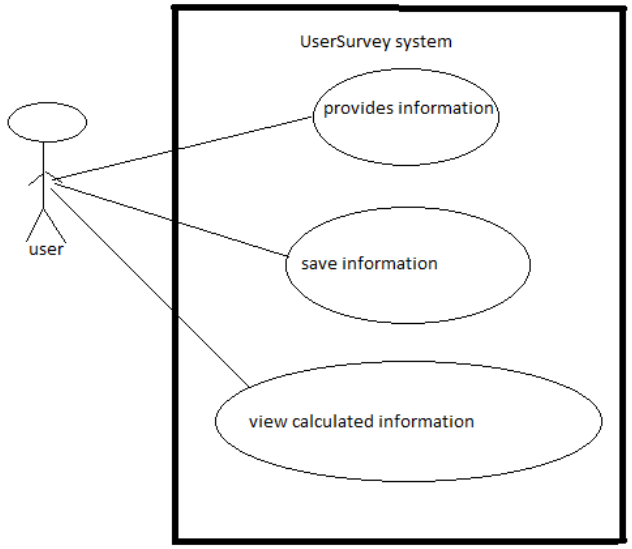


Figure 1.

User Interface

The user interface defines a way in which users will interact with the system via inputs and output that the system accepts and produce. The interface includes menus, forms to direct and captures new information and reports to display information processed.

2. 

Figure 2 describe a menu form. This form allows users to select between taking survey or viewing survey results.

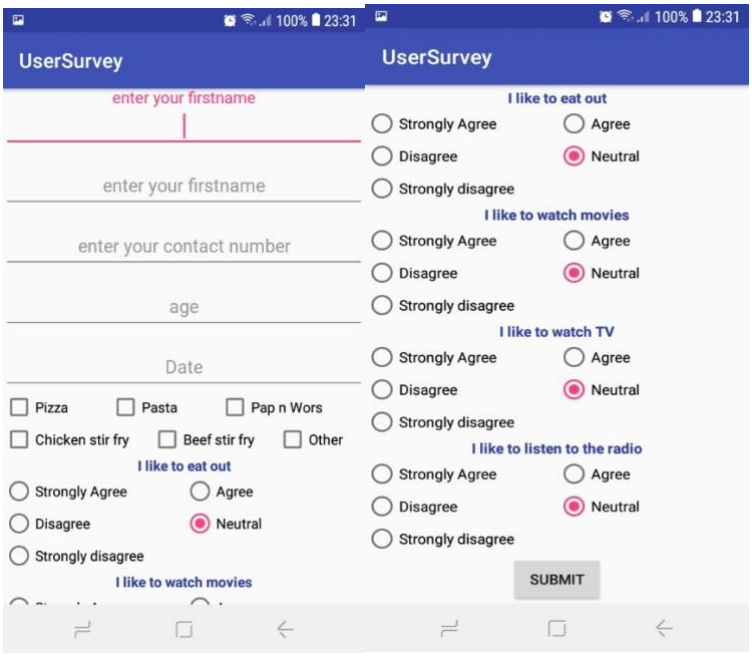


Figure 3.

Figure 3. Depicts how a user whose chooses to take the will go through.

Figure 4.

Figure 4. Show the output of the Survey results.

System Architecture

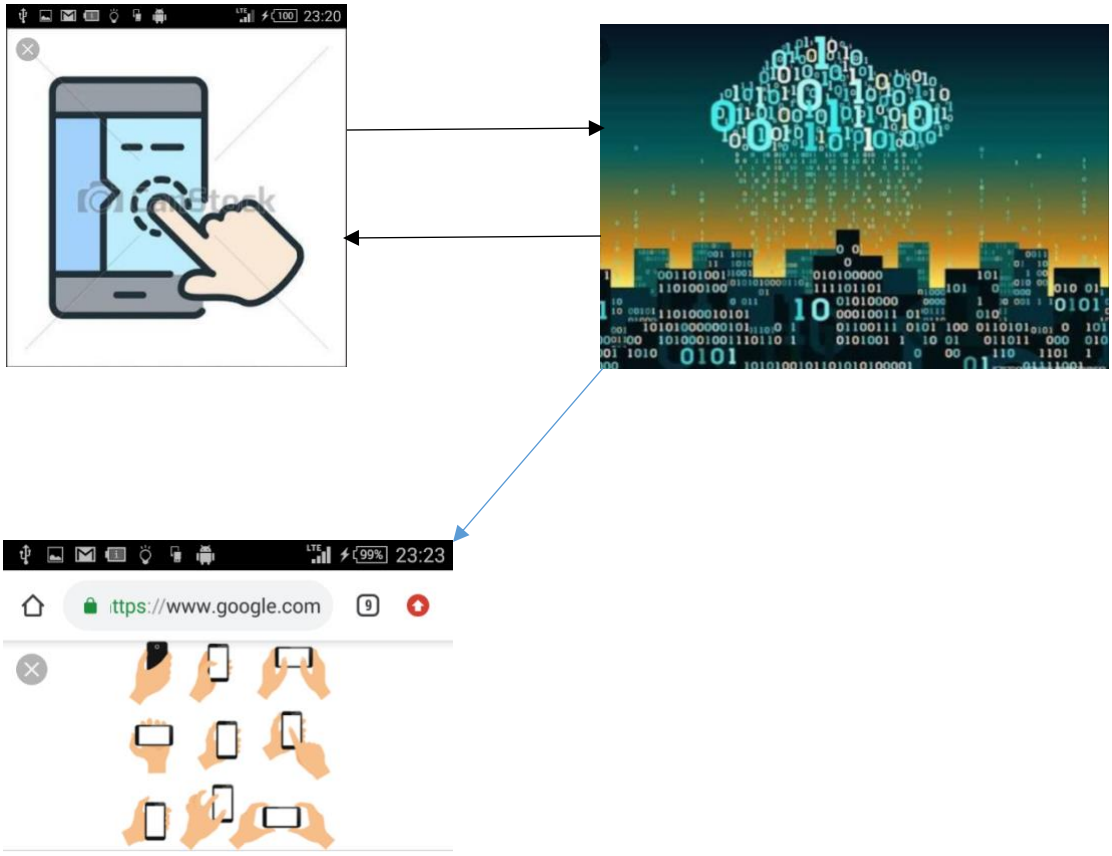


Figure 7

System architecture translates logical design of an information system into a physical structure which include hardware, software, network support and processing methods. The architecture in the study is Client/Server architecture were a user is a client and can access the system using a device that has internet connectivity.