**Assignment 1: Select your product/model & its testing parameters**

**Application:** Pacer app (Pedometer & Fitness mobile application)

**Function:**

It records no. of footsteps & distance covered in miles and kms & calculates active time & gives corresponding calories burnt. It also helps you to set up your daily goals

**Testing Parameters:** We have to test the accuracy of application’s data.

**Assignment 2: Which business model and data model your product belongs to?**

* **Business Model:-**

This application follows **Revenue Streams** characteristic of business model. It is free to use and provides in-app advertising space.

* **Data Model:-**

For Advertisers:

1. Product name
2. Point of contact (POC)
3. Type of advertisement (video or pop-up)
4. Duration

For Normal Users:

1. Date of Birth
2. Gender
3. Height
4. Weight
5. Daily Trends
6. Location

**Assignment 3: Is it product based or service based?**

This application is free meaning, you don’t require any monthly or yearly subscription nor there is any 3rd person to monitor your daily goals & suggest fitness tips i.e., it doesn’t provide any kind of services. So, **it’s a product based application**.

**Assignment 4: Explain flow of scrum for your product.**

This application is very simple and easy to use and understand. Also, its requirement can be known in advance so, we will prefer simply waterfall model or big-bang model.

**Assignment 5: What is the domain of your product?**

It falls under health & fitness domain

**Assignment 6: What are the risks associated with your product?**

1. **Performance Risk:**

This application allows in-app advertising which can hamper the user experience.

1. **Risk of inaccurate data:**

As this mobile application makes a record of physical quantities, there is sometimes a risk that it shows inaccurate data even after numerous tests.

For example, there may be a difference in data recorded when you place your mobile phone in upper pocket and lower pocket. This is because lower part of the body is more agile while walking, running as compared to upper part of the body.

1. **Time Risks:**

The main part of the software testing is testing accuracy of app’s data. We have to test accuracy of such physical quantities which is difficult for a device like mobile phone to record. So, to deal with such situation, we have to carry out numerous manual tests which may affect time to deployment of the product.

**Assignment 7: Define Configuration management for your system**

* The application requires an android, ios environment.
* Application requires 37MB space.
* This application requires Location & Storage permission.

**Assignment 8: Write Non-Functional Parameters for your product**

1. ***Reliability:***

We have to ensure reliability of app’s data regarding footsteps count, distance covered, active taken & calories burnt by conducting numerous manual tests. Testing same function multiple times shouldn’t give much difference in app’s data.

1. ***Usability:***

Under this parameter we have to ensure the user experience about

* How with ease they are able to navigate from one page to another?
* Are the workout programs suggested in their interest?

1. ***Flexibility:***

We have to ensure application’s ease of working in different software & hardware configuration.

1. ***Availability:***

Some functionalities of this application demands access to location based services. We have to check such pre-requisites like gps (or any other service), internet connection, etc.

1. ***Interoperability:***

Under this parameter we have to check interfacing of other software applications like google maps.

**Assignment 9: Opt any two test designs from the list and implement it in your product or any test cases.**

1. **Boundary Value Analysis:**

As discussed earlier, testing data accuracy is the most critical aspect of this app to increase user experience. Under this test we have to check certain conditions listed below:

* How much will be the difference in data of footsteps count recorded when your device is placed in the upper pocket, kept in purse or you are riding a vehicle? Consider a hypothetical situation, where in you are riding 2-wheeler vehicle in a bumpy rough road, the device kept in your pocket may be mistaken that the user is running very fast. As a result it will affect your daily trends.
* How much will be the difference in data of footsteps & calories count recorded when you are hiking. Because, while hiking an average human put smaller steps but relatively burn more calories than normal walking. If location based service is turned off, the device by default will assume that its user is currently walking.

1. **State Transition Diagrams:**

Under this approach, we will be able to analyze the behavior of this application for different input conditions in sequence.

For example,

* How the app records data if the user,
* Runs for 10min then,
* Takes a halt for next 4mins and,
* Runs again for a minute and finally,
* Walks for 15min.

In the above sequence we have to check the pattern of recording data. Designing state transition diagram would be a good help in this situation.

**Assignment 10: Which testing will you use automation, manual or both?**

In testing this app, there are mainly two parts.

* Testing data accuracy and,
* Testing ordinary app functionalities like login page, nickname validity, button, etc.

Testing Data accuracy being the main part can only be accomplished by manual testing methods because here in we have to test accuracy of such physical quantities which are difficult for device like mobile phone to record. After all, we have to walk, run and even hike! These activities can only be performed by a human being.

Testing ordinary app functionalities like login page, nickname, etc., can be accomplished by means of automation testing methods. But, automation testing will only be helpful when there are huge no. of such functionalities to test. This app in particular have comparatively less no. of such functionalities. In this case, it will be more financially feasible if we hire testers rather than paying for automated tools.

**To my conclusion, manual testing methods would be more appropriate to test pacer app.**