IT 314 SOFTWARE ENGINEERING

LAB 4: SPECIFYING TOOLS AND TECHNOLOGY

64. E-COMMERCE PRICE COMPARATOR

GROUP: 28

Finalized tools, technologies and frameworks

Tools : Visual Studio Code

Technology : Web Development, Python

Framework : Javascript, Firebase.

Reason:

- Access to a website is the most efficient way to reach as many people as possible. So, we have used web development as a tool. This is the most accessible and intuitive for users and supports close to all devices.
- There is no special configuration specification of the website and using various tools to control the version makes it even helpful to enhance it further.It can be made responsive to support various kinds of devices and thus, makes it a user friendly environment.

Database for the project:

- We have used firebase as a service (Baas) for storing the database and storing user authentication and various other details.
- The documentation for using this is very concise and easy to understand.
- Firebase Database is a real-time No-SQL cloud-hosted database developed by Google.No separate server is needed to host the database, hence it is cost effective.

- The accessibility is also super intuitive and so managing the database is also very efficient.

Estimation effort

Overall **use-case size point** estimation:

Step 1 : Calculate Technical Complexity Factor (TCF)

Technical Factor	Calculated factor
T1	10
T2	4
T3	2
T5	2
T6	2
T7	2
T8	6
T9	3
T10	2
Total	**33**

TCF = 0.6+(0.01*33) = 0.93

Step 2 : Calculate Environmental Complexity Factor (ECF)

Environmental Factor	Calculated Factor
E1	6
E2	1
E5	1
E6	10
Total	**18**

ECF = 1.4 + (-0.03*18) = 0.86

Step 3 : Calculate Unadjusted Use Case Weight (UUCW)

Use Case Type	Result
Simple	60
Total	**60**

UUCW = 60

Step 4 : Calculate Unadjusted Actor Weight (UAW)

Actor Type	Result
Simple	5
Total	**5**

UAW = 5

Unadjusted Use Case Points (UUCP)
UUCP = UUCW + UAW = 60+5 = 65

Productivity Factor (PF)
PF = 20

Final Calculation:

UCP = TCP * ECF * UUCP
UCP = 0.93 * 0.86 * 65 = 51.987

Estimate = UCP * PF
Estimate = 51.987 * 20 = **1039.47 hours**