National University of Computer & Emerging Sciences, Karachi

Quiz – III (Spring-2023)

Dated: 5 – May - 2023

Student: _____	Name: _____	Section: _____

Q1: Suppose you're working on a software project that involves building an e-commerce website. The website will allow customers to browse products, add them to a shopping cart, and check out. It will also allow administrators to add, edit, and delete products, view orders, and generate reports. Using the Function Point Analysis (FPA) technique, calculate the total number of Unadjusted Function Points (UFP) for the above software project based on the following information:

- There will be 10 different types of reports saved for statistics, or libraray files for the application configuration.
- There will be 15 different types of user inputs for browsing and searching products.
- There will be 5 different types of user inputs for adding, editing, and deleting products.
- There will be 1 type of user outputs as order receipts.
- There will be 2 types of user inputs for managing the shopping cart (a sub-system to be managed separately).

Now, calculate the functional points for the system, when complexity adjustment factors are essential and weighting factor Average. Refer to the table given below.

	Weighting Factor			
Count -	Measurement Parameter	Simple	Average	Complex
1	Number of User Input	2	5	8
5	Number of User Outputs	3	4	7
15	Number of User Inquires	4	6	9
10	Number of Files	6	8	10
2	Number of external Interface	5	7	8

On the basis of above data, let's suppose the average productivity for a system of this type is 10FP/person-week identify the Effort required. Also, if the team has 10 members, identify the project duration.

$$UFP = (1\times5)+(5\times4)+(15\times6)+(10\times8)+(2\times7)$$
$$= 5 + 20 + 90 + 80 + 14$$

$$\boxed{UFP = 209}$$

$$FP = CAF \times UFP$$
$$= (0.65 + (0.01 \times (14 \times 5))) \times 209$$

$$\boxed{FP = 136.55}$$

Effort = FP / Productivity

= 136.55 / 10

Effort = 14.28 ≃ 15 persons ~~week~~.

duration = Effort / team size

= 14.28 / 10

duration = 2.05 ≃ 3 weeks.