

HARSH SINGHANIA
SSW 540 – ESTIMATED EFFORT WITH USE CASE POINTS
CWID - 20007289

UNADJUSTED USE CASE WEIGHT (UUCW)

Use Case	Number of steps	Weight	Number of use cases	Total
Simple	1 to 3 steps	5	2	10
Average	4 to 7 steps	10	5	50
Complex	More than 7 steps	15	3	45
Unadjusted use case weight (UUCW)				105

UNADJUSTED ACTOR WEIGHT (UAW)

Actor	Type	Weight	Number of Actors	Total
Simple	System with API	1	3	3
Average	System with Protocol	2	2	4
Complex	Human Being	3	10	30
Unadjusted Actor Weight (UAW)				37

Calculation for Technical Complexity Factors:

$$TCF = 0.6 + (0.01 \times 60) = 0.6 + 0.6$$

$$TCF = 1.2$$

Calculation for Environmental Complexity Factors:

$$ECF = 1.4 - (0.03 \times 14.5) = 1.4 - 0.435$$

$$ECF = 0.965$$

Calculation for getting UCP:

$$UCP = (UAW + UUCW) \times TCF \times ECF$$

$$UCP = (37 + 105) \times 1.2 \times 0.965, UCP = 164$$

Estimated Effort Calculation:

$$\text{We know, Effort} = UCP \times PF$$

For PF, we have considered that this isn't the team's 1st project and as stated in the paper reference for this assignment, we can only assume the PF to be 20 if it is the team's 1st project. I have set the value of PF to be 30, which also correlates to the productivity being low as the PF value is higher.

$$\text{Effort} = UCP \times 30$$

$$\text{Effort} = 164 \times 30 = 4920 \text{ hours}$$