IT314-Software Engineering

G1-Pet Adoption System

Lab3 - Task 3

Sprints & Function point estimation

Complexity Factor:

Complexity factor	value
Heavy Use Configuration	1
Data Communication	2
Distributed Processing Function	1
Performance	2
End user Efficiency	2
Online Data Entry	2
Transaction Rate	3
Operation Ease	1
Complexity of UI	3
Complexity of processing	1
Reusability	1
Installation	1
Supportability	0
Training required	0
$\sum F_i$	20

Complexity Factor = $0.65 + 0.01\sum F_i$

$$CF = 0.65 + 0.01*20 = 0.65 + 0.2 = 0.85$$

Sprint 1:

Focus on creating a UI/UX with a working login and sign in page for the users. Add descriptions about pets and a search feature and ability to view them individually in more detail.

In general, create a core base for the upcoming features.

Unadjusted Function Point:

Parameter	Value	Weighing Factor	Weighted Value
External Input (EI)	2	3	6
External Output (EO)	2	4	8
External Query (EQ)	1	3	3
Internal Logic Files (ILF)	1	7	7

External Interface Files (EIF)	2	5	10
Unadjusted Function Point (UFP)			34

Adjusted Function Point = UFP * CF = 34 * 0.85 = 28.9

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 28.9 * 8 = 231.2 ≈ 230 hrs

Assuming 1.5 hrs of per head per day, a total of 13.5 hrs per day, estimates to 230/13.5 ≈ 17 days

Estimated time: 2.5 weeks

Sprint 2:

Add the filter by feature on top of the search feature. Also add an update pet details option for the shelter owners. Finally add the application feature through which the user can apply for adoption of a pet.

In this sprint we want to add depth to some features, as well as create new ones which are essential for the system.

Unadjusted Function Point:

Parameter	Value	Weighing Factor	Weighted Value
External Input (EI)	3	4	12
External Output (EO)	0	5	0
External Query (EQ)	0	4	0
Internal Logic Files (ILF)	1	10	10
External Interface Files (EIF)	2	7	14
Unadjusted Function Point (UFP)			36

Adjusted Function Point = UFP * CF = 36 * 0.85 = 30.6

Hours required per FP = 8 hrs

Total Estimated Time (Hours) = 30.6 * 8 = 244.8 ≈ 240 hrs

Assuming 1.5 hrs of per head per day, a total of 13.5 hrs per day, estimates to 240/13.5 ≈ 17 days

Estimated time: 2.5 weeks

Sprint 3:

Add the reviewing system so that the shelter owner can accept a particular request and reject others if necessary. This should also be reflected to the user in

the application status. Also add an option to schedule a pet visit so the adopter can have a meet and greet with the pet.

Here we try to make the system more useful and user friendly and provide the users with some valuable features.

Unadjusted Function Point:

Parameter	Value	Weighing Factor	Weighted Value
External Input (EI)	1	3	3
External Output (EO)	1	4	4
External Query (EQ)	1	3	3
Internal Logic Files (ILF)	3	7	21
External Interface Files (EIF)	0	5	0
Unadjusted Function Point (UFP)			31

Adjusted Function Point = UFP * CF = 31 * 0.85 = 26.35

Hours required per FP = 8 hrs

Total Estimated Time (Hours) = 26.35 * 8 = 210.8 ≈ 210 hrs

Assuming 1.5 hrs of per head per day, a total of 13.5 hrs per day, estimates to 210/13.5 ≈ 15 days

Estimated time: 2 weeks

Sprint 4:

Add blogs and feedbacks and a photo gallery for the users to share their experience as well as a donations page so that users can support the shelter.

In the final sprint we try to incorporate the final few features which can be quite helpful for some users and the shelter as well.

Unadjusted Function Point:

Parameter	Value	Weighing Factor	Weighted Value
External Input (EI)	3	3	9
External Output (EO)	1	4	4
External Query (EQ)	0	3	0
Internal Logic Files (ILF)	3	7	21
External Interface Files (EIF)	0	5	0

Unadjusted Function Point (UFP)	34

Adjusted Function Point = UFP * CF = 34 * 0.85 = 28.9

Hours required per FP = 8 hrs

Total Estimated Time (Hours) = 28.9 * 8 = 231.2 ≈ 230 hrs

Assuming 1.5 hrs of per head per day, a total of 13.5 hrs per day, estimates to 230/13.5 ≈ 17 days

Estimated time: 2.5 weeks