IT314: Software Engineering

HEALTHCARE PROVIDER COMPARISON PLATFORM

Lab 3- Sprints from Product Backlog

Student ID	Name
202201467	PATEL DHARMI MEHULBHAI
202201510	VARIYA HITANSHU JAYDIPBHAI
202201297	PATEL SHAIL NIPUN
202201507	DANANI ZEEL MAHESHBHAI
202201506	PATEL MIHIRKUMAR SURESHBHAI
202201500	PRAJAPATI HARSHITKUMAR MAHENDRABHAI
202201466	ADITYA RAINA
202201488	SIDAPARA MALAY RASIKBHAI
202201517	AYUSH RANJITBHAI CHAUDHARI

Sprint Details and Function Point Estimation

Sprint 1:

User login, register and profile edit

Features:

- Create Profile
- View Profile
- Edit Profile

Function Point Calculation:

Unadjusted Function Point Count:

EI:

1. Registration form - Average
2. Login Details - Low
3. Edit Details- Average

EO:

1. Registration Success Confirmation Mail - Low
2. Error message in case of Login fail-Low

ILF:

1. User Details Database - Average

UFPC = (1 x 3 + 2 x 4) + (2 x 4) + (1 x 10) = 29

Cost Adjustment Factor:

No.	Factor Description	Weight
01.	Backup and Recovery	4
02.	Data Communication	2
03.	Distributed Processing Functions	0

04.	Is Performance Critical?	2
05.	Existing Operating Environment	2
06.	On-line Data Entry	2
07.	Input Transaction built over Multiple Screens	1
08.	Master Files updated On-line	3
09.	Complexity of Inputs, Outputs, Files, Inquiries	2
10.	Complexity of Processing	2
11.	Code Design for Reuse	3
12.	Are Conversion/Installation included in Design?	1
13.	Multiple Installations	1
14.	Application Designed to Facilitate Change by the User	3
TOTAL		**28**

CAF = 0.65 + (0.01 x 28) = 0.93

Adjusted Function Point Count:

AFPC = UFPC x CAF = 29 x 0.93 = 26.97

AFPC = 26.1

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 26.97* 8 = 215.76 ≈ 216 hours

Assuming 2 hrs of per head per day, a total of 18 hrs per day, estimates to 216/18 = 12 days

Sprint 2:

Book Appointment

Features:

- Searching
- Filtering
- View doctor specification/profile
- Booking Appointment
- Cancel Appointment
- View Appointment

Function Point Calculation:

Unadjusted Function Point Count:

EI:

1. Book Appointment - Low
2. Cancel Appointment - Low

EO:

1. Confirmation Mail for Book Appointment and Cancel Appointment - Low

EQ:

1. Searching -High
2. Filtering - Average
3. View Appointment details - Low
4. View doctor details - Low

ILF:

1. Appointment List - Average
2. Doctor Details database - Average

UFPC = (2 x 3) + (1 x 4) + (2 x 3 + 4 x 1 + 1 x 6) + (2 x 10) = 46

Cost Adjustment Factor:

No.	Factor Description	Weight
01.	Backup and Recovery	3
02.	Data Communication	4
03.	Distributed Processing Functions	1
04.	Is Performance Critical?	3
05.	Existing Operating Environment	2
06.	On-line Data Entry	3
07.	Input Transaction built over Multiple Screens	1
08.	Master Files updated On-line	2
09.	Complexity of Inputs, Outputs, Files, Inquiries	4
10.	Complexity of Processing	3
11.	Code Design for Reuse	3
12.	Are Conversion/Installation included in Design?	1
13.	Multiple Installations	2
14.	Application Designed to Facilitate Change by the User	3
TOTAL		35

CAF = 0.65 + (0.01 x 35) = 1

Adjusted Function Point Count:

AFPC = UFPC x CAF = 46 x 1= 46

AFPC = 43.7

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 46* 8 = 368

Assuming 2 hrs of per head per day, a total of 18 hrs per day, estimates to 368/18 ≈ 21 days

Sprint 3:

Report Generation

Features:

- Generating Report
- Prescribing medicines based on diagnosis

Function Point Calculation:

Unadjusted Function Point Count:

EI:

1. Report upload by Pathologist - Low
2. Prescription upload by Doctor - Low

EO:

1. View report - Average
2. View prescribed medicine list - Average

ILF:

1. Report and Prescription Database - Average

UFPC = (2 x 3) + (2 x 5) + (1 x 10) = 26

Cost Adjustment Factor:

No.	Factor Description	Weight
01.	Backup and Recovery	2
02.	Data Communication	2
03.	Distributed Processing Functions	2
04.	Is Performance Critical?	2
05.	Existing Operating Environment	2
06.	On-line Data Entry	2

07.	Input Transaction built over Multiple Screens	3
08.	Master Files updated On-line	3
09.	Complexity of Inputs, Outputs, Files, Inquiries	3
10.	Complexity of Processing	3
11.	Code Design for Reuse	1
12.	Are Conversion/Installation included in Design?	2
13.	Multiple Installations	1
14.	Application Designed to Facilitate Change by the User	2
TOTAL		**30**

CAF = 0.65 + (0.01 x 30) = 0.95

Adjusted Function Point Count:

AFPC = UFPC x CAF = 26 x 0.95 = 24.70

AFPC = 24.18

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 24.70* 8 = 197.6 ≈ 198 hours

Assuming 2 hrs of per head per day, a total of 18 hrs per day, estimates to 198/18 ≈ 11 days

Sprint 4:

Order medicine

Features:

- Ordering medicine based on prescription.
- Updating an order status.
- Cancel Order

Function Point Calculation:

Unadjusted Function Point Count:

EI:

1. Placing Order - Average
2. Cancel Order - Average

EO:

1. Order place and Order cancel Confirmation Mail - Low

ILF:

1. User and their Order database - Average

EIF:

1. Updating order status - Average

UFPC = (2 x 3) + (1 x 4) + (2 x 10) + (1 x 7) = 36

Cost Adjustment Factor:

No.	Factor Description	Weight
01.	Backup and Recovery	3
02.	Data Communication	2
03.	Distributed Processing Functions	1

04.	Is Performance Critical?	3
05.	Existing Operating Environment	2
06.	On-line Data Entry	3
07.	Input Transaction built over Multiple Screens	3
08.	Master Files updated On-line	3
09.	Complexity of Inputs, Outputs, Files, Inquiries	2
10.	Complexity of Processing	3
11.	Code Design for Reuse	3
12.	Are Conversion/Installation included in Design?	1
13.	Multiple Installations	1
14.	Application Designed to Facilitate Change by the User	3
TOTAL		**28**

CAF = 0.65 + (0.01 x 31) = 0.96

Adjusted Function Point Count:

AFPC = UFPC x CAF = 36 x 0.96 = 34.56

AFPC = 34.56

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 34.56* 8 = 276.48≈ 276 hours

Assuming 2 hrs of per head per day, a total of 18 hrs per day, estimates to 276/18 ≈ 15 days

Sprint 5:

Payment and review

Features:

- Processing payment for all the services.
- Reviewing and rating the specialist.

Function Point Calculation:

Unadjusted Function Point Count:

EI:

1. Give ratings and reviews - Average

EO:

1. Payment Success mail and Slip - Low
2. Error message in case of Payment fail-Low

EQ:

1. View bills - Average

ILF:

1. User ratings and reviews database - Average
2. Payment information database - Average

EIF:

1. External Payment Gateway API - High

UFPC = (1 x 4) + (2 x 4) + (1 x 4) + (2 x 10) + (1 x 10) = 46

Cost Adjustment Factor:

No.	Factor Description	Weight
01.	Backup and Recovery	4

02.	Data Communication	4
03.	Distributed Processing Functions	4
04.	Is Performance Critical?	3
05.	Existing Operating Environment	2
06.	On-line Data Entry	2
07.	Input Transaction built over Multiple Screens	2
08.	Master Files updated On-line	3
09.	Complexity of Inputs, Outputs, Files, Inquiries	2
10.	Complexity of Processing	4
11.	Code Design for Reuse	2
12.	Are Conversion/Installation included in Design?	1
13.	Multiple Installations	2
14.	Application Designed to Facilitate Change by the User	2
TOTAL		**37**

CAF = 0.65 + (0.01 x 37) = 1.02

Adjusted Function Point Count:

AFPC = UFPC x CAF = 46 x 1.02 = 46.92

AFPC = 46.92

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 46.92 * 8 = 375.36 ≈ 375 hours

Assuming 2 hrs of per head per day, a total of 18 hrs per day, estimates to 375/18 = 21 days

Sprint 6:

Website management

Features:

- Generate reports about user traffic and performance.
- View user activity and app statistics.
- Notifications for Newly added features.
- Error handling.

Function Point Calculation:

Unadjusted Function Point Count:

EO:

1. Notifications for Newly added features- Average
2. View reports - High

EQ:

1. View user activity , website statistics and errors - Average

ILF:

1. Common Database - High

EIF:

1. External performance Checking Service - Average

UFPC = (1 x 5 + 1 x 7) + (1 x 4) + (1 x 15) + (1 x 7) = 38

Cost Adjustment Factor:

No.	Factor Description	Weight
01.	Backup and Recovery	4

02.	Data Communication	3
03.	Distributed Processing Functions	3
04.	Is Performance Critical?	3
05.	Existing Operating Environment	3
06.	On-line Data Entry	3
07.	Input Transaction built over Multiple Screens	2
08.	Master Files updated On-line	4
09.	Complexity of Inputs, Outputs, Files, Inquiries	3
10.	Complexity of Processing	3
11.	Code Design for Reuse	3
12.	Are Conversion/Installation included in Design?	1
13.	Multiple Installations	1
14.	Application Designed to Facilitate Change by the User	3
TOTAL		**39**

CAF = 0.65 + (0.01 x 39) = 1.04

Adjusted Function Point Count:

AFPC = UFPC x CAF = 38 x 1.04 = 39.52

AFPC = 39.52

Hours required per FP = 8 hrs (assumption)

Total Estimated Time (Hours) = 39.52* 8 = 316.16 ≈ 316 hours

Assuming 2 hrs of per head per day, a total of 18 hrs per day, estimates to 316/18 ≈ 18 days

Estimated Total Time: 12 + 21 + 11 + 15 + 21 + 18 = 98 Days (14 Weeks)