
# IT314: SOFTWARE ENGINEERING
# PROJECT GROUP: 15

## TOPIC: NEWS AGGREGATOR
## Lab 3-Sprints from Product Backlog

| Student ID | Name |
|---|---|
| 202201213 | Akabari Kartavya Mansukhbhai |
| 202201220 | Lathiya Yashvi Vipulbhai |
| 202201249 | Vaghani Parthiv Vijaybhai |
| 202201254 | Vasa Saumya Kalpesh |
| 202201221 | Chauhan Fajimiya Mahemudmiya |
| 202201215 | Akbari Kamal Nitinbhai |
| 202201201 | Boghara Zeelkumar Ghanshyambhai |
| 202201256 | Ayush Pandita |
| 202201218 | Sarvan Meet Sunilkumar |
| 202201212 | Rathod Harsh Dilipbhai |

IT314-Software Engineering

# Sprints & Function point estimation

## Sprint 1: User Registration & Basic Profile Management

- Unadjusted Function Point:

| Type | Weigh | Value | Tota |
|---|---|---|---|
| Internal Logical File (ILF) | 10 | 1 | 10 |
| External Interface File (EIF) | 5 | 1 | 5 |
| External Input (EI) | 6 | 2 | 12 |
| External Output (EO) | 4 | 2 | 8 |
| External Query (EQ) | 3 | 1 | 3 |
| **Total Unadjusted Function Points (UFP)** | | | **38** |

- Technical Complexity Factors:

| Factor | Value |
|---|---|
| Backup and Recovery | 2 |
| Data Communication | 2 |
| Distributed Processing Functions | 1 |

| | |
|---|---|
| Is Performance Critical? | 2 |
| Existing Operating Environment | 2 |
| On-line Data Entry | 2 |
| Input Transaction Built Over Multiple Screens | 1 |
| Master Files Updated On-line | 2 |
| Complexity of Inputs, Outputs, Files, Inquiries | 2 |
| Complexity of Processing | 2 |
| Code Design for Reuse | 1 |
| Conversion/Installation Included | 1 |
| Multiple Installations | 0 |
| Application Designed to Facilitate Change | 2 |

➢ Processing Complexity (PC): 22

➢ Adjusted Processing Complexity (PCA): $0.65 + (0.01 \times 22) = 0.87$

➢ Total Adjusted Function Points (TAFP): $38 \times 0.87 = 33$

## Sprint 2: Article Viewing & Basic Interactions

- Unadjusted Function Point:

| Type | Weight | Value | Total |
|---|---|---|---|
| Internal Logical File (ILF) | 8 | 2 | 16 |
| External Interface File (EIF) | 4 | 1 | 4 |
| External Input (EI) | 5 | 2 | 10 |
| External Output (EO) | 5 | 2 | 10 |
| External Query (EQ) | 3 | 1 | 3 |
| **Total Unadjusted Function Points (TUFP)** | | | **43** |

- Technical Complexity Factors:

| Factor | Value |
|---|---|
| Backup and Recovery | 1 |

| | |
|---|---|
| Data Communication | 2 |
| Distributed Processing Functions | 1 |
| Is Performance Critical? | 2 |
| Existing Operating Environment | 2 |
| On-line Data Entry | 2 |
| Input Transaction Built Over Multiple Screens | 1 |
| Master Files Updated On-line | 1 |
| Complexity of Inputs, Outputs, Files, Inquiries | 2 |
| Complexity of Processing | 2 |
| Code Design for Reuse | 1 |
| Conversion/Installation Included | 1 |
| Multiple Installations | 0 |
| Application Designed to Facilitate Change | 1 |

➢ Processing Complexity (PC): 17

➢ Adjusted Processing Complexity (PCA): 0.65 + (0.01 × 17) = 0.82

➢ Total Adjusted Function Points (TAFP): 43 × 0.82 = 35

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## Sprint 3: News Provider Management

- Unadjusted Function Point:

| Type | Weight | Value | Total |
|---|---|---|---|
| Internal Logical File (ILF) | 12 | 2 | 24 |
| External Interface File (EIF) | 6 | 2 | 12 |
| External Input (EI) | 8 | 2 | 16 |
| External Output (EO) | 6 | 2 | 12 |
| External Query (EQ) | 4 | 1 | 4 |
| **Total Unadjusted Function Points (TUFP)** | | | **68** |

- Technical Complexity Factors:

| Factor | Value |
|---|---|
| Backup and Recovery | 2 |
| Data Communication | 3 |
| Distributed Processing Functions | 2 |
| Is Performance Critical? | 3 |
| Existing Operating Environment | 2 |
| On-line Data Entry | 3 |
| Input Transaction Built Over Multiple Screens | 2 |
| Master Files Updated On-line | 2 |
| Complexity of Inputs, Outputs, Files, Inquiries | 3 |

| | |
|---|---|
| Complexity of Processing | 3 |
| Code Design for Reuse | 2 |
| Conversion/Installation Included | 2 |
| Multiple Installations | 0 |
| Application Designed to Facilitate Change | 2 |

➢ Processing Complexity (PC): 34

➢ Adjusted Processing Complexity (PCA): 0.65 + (0.01 × 34) = 0.99

➢ Total Adjusted Function Points (TAFP): 68 × 0.99 = 67

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## Sprint 4: Reader Interactions & Content Management

- Unadjusted Function Point:

| Type | Weight | Value | Total |
|---|---|---|---|
| Internal Logical File (ILF) | 10 | 3 | 30 |

| | | | |
|---|---|---|---|
| External Interface File (EIF) | 5 | 2 | 10 |
| External Input (EI) | 7 | 3 | 21 |
| External Output (EO) | 7 | 3 | 21 |
| External Query (EQ) | 5 | 2 | 10 |
| **Total Unadjusted Function Points (TUFP)** | | | **92** |

- Technical Complexity Factors:

| **Factor** | **Value** |
|---|---|
| Backup and Recovery | 2 |
| Data Communication | 3 |
| Distributed Processing Functions | 2 |
| Is Performance Critical? | 3 |
| Existing Operating Environment | 3 |

| | |
|---|---|
| On-line Data Entry | 3 |
| Input Transaction Built Over Multiple Screens | 2 |
| Master Files Updated On-line | 2 |
| Complexity of Inputs, Outputs, Files, Inquiries | 3 |
| Complexity of Processing | 3 |
| Code Design for Reuse | 2 |
| Conversion/Installation Included | 2 |
| Multiple Installations | 1 |
| Application Designed to Facilitate Change | 3 |

➢ Processing Complexity (PC): 35

➢ Adjusted Processing Complexity (PCA): 0.65 + (0.01 × 35) = 1.00

➢ Total Adjusted Function Points (TAFP): 92 × 1.00 = 92

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## Sprint 5: Admin Controls & Analytics

- Unadjusted Function Point:

| Type | Weight | Value | Total |
|---|---|---|---|
| Internal Logical File (ILF) | 12 | 3 | 36 |
| External Interface File (EIF) | 6 | 2 | 12 |
| External Input (EI) | 9 | 3 | 27 |
| External Output (EO) | 8 | 3 | 24 |
| External Query (EQ) | 6 | 2 | 12 |
| **Total Unadjusted Function Points (TUFP)** | | | **111** |

- Technical Complexity Factors:

| Factor | Value |
|---|---|
| Backup and Recovery | 3 |
| Data Communication | 3 |

| | |
|---|---|
| Distributed Processing Functions | 3 |
| Is Performance Critical? | 4 |
| Existing Operating Environment | 3 |
| On-line Data Entry | 3 |
| Input Transaction Built Over Multiple Screens | 2 |
| Master Files Updated On-line | 3 |
| Complexity of Inputs, Outputs, Files, Inquiries | 4 |
| Complexity of Processing | 3 |
| Code Design for Reuse | 2 |
| Conversion/Installation Included | 2 |
| Multiple Installations | 1 |
| Application Designed to Facilitate Change | 2 |

➢ Processing Complexity (PC): 31

➢ Adjusted Processing Complexity (PCA): 0.65 + (0.01 × 31) = 0.96

➢ Total Adjusted Function Points (TAFP): 111 × 0.96 = 106

➔ Total sprints - **5**

➔ Total Estimated Time for the Project: **10 weeks**