System Size

Function Point Estimation

Functionality	Input	Output	Queries	File	Program Interface
Register	1	1	2	1	0
Log in	1	1	2	1	0
Provide basic information	1	1	4	1	0
Enter studying preferences	1	1	5	1	0
Choose availability status	1	1	1	1	0
Choose time to study	1	1	1	1	0
Choose duration of study session	1	1	1	1	0
Accept or decline study buddy	1	1	1	1	0
Be matched up with study buddy	0	1	0	1	0
Communicate with study buddy in chat box	1	1	0	0	0
View total hours spent with study buddy and number of study buddies connected with	0	2	0	1	0

	Complexity				
Description	Total #	Low	Medium	High	Total
Inputs	9	6 * 3	2 * 4	1 * 6	32
Outputs	12	7 * 4	3 * 5	2 * 7	57
Queries	16	8 * 7	8 * 10	0 * 15	136
Files	10	5 * 7	3 * 10	2 * 15	95

Program Interface	0	-	-	-	0
Total unadjusted function points (TUFP) =					320

The total processing complexity (PC):-

Tasks	Complexity
Data communication	3
Team cohesion	1
Familiarity with technology	3
On-line data entry	2
Performance	3
End-user efficiency	2
Operational ease	3
Reusability	1
Total Processing Complexity (TPC) =	18

- **The adjusted processing complexity (APC):-**
  APC=0.65+(0.01*TPC)
  APC=0.65+(0.01*18)=0.83

- **The total adjusted function points (TAFP):-**
  TAFP=TUFP*APC
  TAFP=320*0.83=265.6

Converting Function Points to Line of Code (LOC):-

Language/Tool	Number of LOC/ FP
HTML/CSS	160.00
Javascript	71.11
Database	40.00
Java	53.33

Reference Table

- 30% will be done with HTML/CSS
- 30% will be done with JavaScript
- 30% will be done with Databases
- 10% will be done with Java

- **Number of lines of code (LOC)=TAFP* # (lines of code\FP) * %**
  - For Html/CSS = 265.6 * 15 * 0.30 = 1195.20
  - For JavaScript = 265.6 * 71.11* 0.30 = 5666.04
  - For Databases = 265.6 * 40.00 * 0.30 = 3187.20
  - For Java = 265.6 * 53.33* 0.10 = 1416.44
  - Total LOC = 1195.20 + 5666.04 + 3187.20 + 1416.44 = 11464.88

- **Estimating the effort**
  Effort = 2.4*LOC/1000
  Effort = 2.4 * 11464.88/1000 = 27.52

- **Estimating the schedule time**
  Time = 2.5*(effort)^0.38
  Time = 2.5 * (27.52)^0.38 = 8.81

- **Estimating the number of persons**
  Avg # persons =effort/time
  Avg # persons = 27.52/8.81 = 3.12