

Table C55 PSP2 Project Plan Summary

Student	James Small	Date	3/9/14
Program	6A	Program #	9
Instructor	Dr. Concepcion	Language	C++

Summary	Plan	Actual	To Date
LOC/Hour	63.5	38.7	59
Actual Time		121	819
Planned Time	85		680
CPI(Cost-Performance Index)			0.83
			(Actual/Planned)
% Reused	36.6	37.6	15.4
% New Reused	0	0	26
Test Defects/KLOC	17.9	12.8	17.4
Total Defects/KLOC	35.8	51.3	37.3
Yield %	15.385	50	20

Program Size (LOC):	Plan	Actual	To Date
Base(B)	278	278	
	(Measured)	(Measured)	
Deleted (D)	4	6	
	(Estimated)	(Counted)	
Modified (M)	2	3	
	(Estimated)	(Counted)	
Added (A)	88	75	
	(N-M)	(T-B+D-R)	
Reused (R)	209	209	328
	(Estimated)	(Counted)	
Total New & Changed (N)	90	78	805
	(Estimated)	(A+M)	
Total LOC (T)	571	556	2127
	(N+B-M-D+R)	(Measured)	
Total New Reused	0	0	209
Upper Prediction Interval (70%)	233.194		
Lower Prediction Interval (70%)	67.7976		

Time in Phase (min.)	Plan	Actual	To Date	To Date %
Planning	4	6	35	4.3
Design	9	10	85	10.4
Design review	1	8	18	2.2
Code	30	39	288	35.2
Code review	2	14	29	3.5
Compile	5	16	54	6.6
Test	23	11	198	24.2
Postmortem	12	17	112	13.7
Total	85	121	819	100
Total Time UPI (70%)	129.15			
Total Time LPI (70%)	72.2603			

(continued)

Table C55 PSP2 Project Plan Summary (continued)

Student	James Small	Date	3/4/14
Program	4A	Program #	8
Instructor	Dr. Concepcion	Language	C++

Defects Injected	<i>Plan</i>	<i>Actual</i>	<i>To Date</i>	<i>To Date %</i>
Planning	0	0	0	0
Design	0.1	0	1	3.3
<i>Design review</i>	0	0	0	0
Code	3.1	4	29	96.7
<i>Code review</i>	0	0	0	0
Compile	0	0	0	0
Test	0	0	0	0
Total Development	3.2	4	30	100

Defects Removed	<i>Plan</i>	<i>Actual</i>	<i>To Date</i>	<i>To Date %</i>
Planning	0	0	0	0
Design	0	0	0	0
<i>Design review</i>	0	0	0	0
Code	0	0	0	0
<i>Code review</i>	0.5	2	6	20
Compile	1.1	1	10	33.3
Test	1.6	1	14	46.7
Total Development	3.2	4	30	100
After Development	0	0	0	

<i>Defect Removal Efficiency</i>	<i>Plan</i>	<i>Actual</i>	<i>To Date</i>
<i>Defects/Hour - Design review</i>	0	0	0
<i>Defects/Hour - Code review</i>	16.27	8.57	12.41
<i>Defects/Hour - Compile</i>	14.45	3.75	11.11
<i>Defects/Hour - Test</i>	4.24	5.45	4.24
<i>DRL(DLDR/UT)</i>	0	0	0
<i>DRL(CodeReview/UT)</i>	3.84	1.57	2.93
<i>DRL(Compile/UT)</i>	3.41	0.69	2.62

Table C39 Size Estimating Template

Student	James Small								Date	3/9/14		
Instructor	Dr. Concepcion								Program #	9		
BASE PROGRAM LOC										ESTIMATE	ACTUAL	
BASE SIZE (B)	=>	=>	=>	=>	=>	=>	=>	=>	=>	278	278	
LOC DELETED (D)	=>	=>	=>	=>	=>	=>	=>	=>	=>	4	6	
LOC MODIFIED (M)	=>	=>	=>	=>	=>	=>	=>	=>	=>	2	3	
OBJECT LOC												
BASE ADDITIONS		TYPE ¹		METHODS		REL. SIZE		LOC		LOC		
TOTAL BASE ADDITIONS (BA)										=>	=>	
NEW OBJECTS		TYPE		METHODS		REL. SIZE		LOC (New Reused*)				
Linear Regression		Calc		9		Medium		101		140*		
TOTAL NEW OBJECTS (NO)										=>	=>	
										101	140	
REUSED OBJECTS												
StringToFloat (3B)										50	50	
FileCheck (4B)										19	19	
LinearRegression (4A)										140	140	
REUSED TOTAL (R)										=>	=>	
										209	209	
										SIZE	TIME	
Estimated Object LOC (E):										E = BA + NO + M	2	
Regression Parameters:										β_0 (size and time)	151.055	100.656
Regression Parameters:										β_1 (size and time)	-0.279586	0.024859
Estimated New and Changed LOC (N):										N = $\beta_0 + \beta_1 * E$	150.496	
Estimated Total LOC:										T = N + B - D - M + R	628.496	
Estimated Total New Reuse (sum of * LOC):										0		
Estimated Total Development Time:										Time = $\beta_0 + \beta_1 * E$		100.705
Prediction Range:										Range	82.6983	28.445
Upper Prediction Interval:										UPI = N + Range	233.194	129.15
Lower Prediction Interval:										LPI = N - Range	67.7976	72.2603
Prediction Interval Percent:										70%	70%	

¹ L=Logic, I=I/O, C=Calculation, T=Text, D=Data, S=Set-up