Assignment Kit # 4

Process version: PSP1

Lecture Number: 4

Assignment:

	Text	Read the last half of Chapter 5.
	Program 4A	Use PSP1 to write program 4A to calculate the linear regression parameters from a linked list.

Before writing program 4A, read the process and exercise specifications in Appendices C and D.

Assignment Kit 4 Contents	Instructions	Order to submit assignment
PSP1 Process Scripts		PSP1 Project Plan Summary
C30 PSP1 Script	n/a	Test Report
C31 PSP1 Planning Script	n/a	PIP form, including lessons learned
C32 PSP1 Development Script	n/a	Size Estimating Template
C33 PSP1 Postmortem Script	n/a	Time Recording Log
C36 PROBE Estimating Script	n/a	Defect Recording Log
Forms, Templates, and Standards		Source program listing
C34 PSP1 Project Plan Summary	C35	Other requested materials
C37 Test Report Template	C38	
C39 Size Estimating Template	C40	
C27 Process Improvement Proposal	C28	
C29 Coding Standard	n/a	
C16 Time Recording Log	C17	
C18 Defect Recording Log	C19	
C20 Defect Type Standard	n/a	

Table C34 PSP1 Project Plan Summary

Student		Date	
Program		Program #	
Instructor		Language	

Summary LOC/Hour	***Plan***	***Actual***	***To Date***

Program Size (LOC):	***Plan***	**Actual**	**To Date**
Base(B)	(Measured)	(Measured)	
Deleted (D)	(Estimated)	(Counted)	
Modified (M)	(Estimated)	(Counted)	
Added (A)	(N-M)	(T-B+D-R)	
Reused (R)	(Estimated)	(Counted)	
Total New & Changed (N)	(Estimated)	(A+M)	
Total LOC (T)	(N+B-M-D+R)	(Measured)	
Total New Reused			

Time in Phase (min.)	**Plan**	**Actual**	**To Date**	**To Date %**
Planning				
Design				
Code				
Compile				
Test				
Postmortem				
Total				

Defects Injected	**Actual**	**To Date**	**To Date %**
Planning			
Design			
Code			
Compile			
Test			
Total Development			

Defects Removed	**Actual**	**To Date**	**To Date %**
Planning			
Design			
Code			
Compile			
Test			
Total Development			
After Development			

Table C37 Test Report Template

Student _____ Date _____
Instructor _____ Program # _____

Test Name/Number	
Test Objective	
Test Description	
Test Conditions	
Expected Results	
Actual Results	
Test Name/Number	
Test Objective	
Test Description	
Test Conditions	
Expected Results	
Actual Results	

TABLE C39 SIZE ESTIMATING TEMPLATE

Student _____ Date _____

Instructor _____ Program # _____

BASE PROGRAM LOC	ESTIMATE	ACTUAL
BASE SIZE (B) => => => => => => => => => =>		
LOC DELETED (D) => => => => => => => => =>		
LOC MODIFIED (M) => => => => => => => => =>		

OBJECT LOC

BASE ADDITIONS	TYPE[1]	METHODS	REL. SIZE	LOC	LOC
TOTAL BASE ADDITIONS (BA)=> => => => => =>					

NEW OBJECTS	TYPE	METHODS	REL. SIZE	LOC (New Reused*)	
TOTAL NEW OBJECTS (NO)=> => => => => => => =>					

REUSED OBJECTS

REUSED TOTAL (R) => => => => => => => =>		

		SIZE	TIME
Estimated Object LOC (E):	E=BA+NO+M		
Regression Parameters:	β_0 (size and time)		
Regression Parameters:	β_1 (size and time)		
Estimated New and Changed LOC (N):	N=β_0+β_1*E		
Estimated Total LOC:	T=N+B−D−M+R		
Estimated Total New Reuse (sum of * LOC):			
Estimated Total Development Time:	Time=β_0+β_1*E		
Prediction Range:	Range		
Upper Prediction Interval:	UPI=N+Range		
Lower Prediction Interval:	LPI=N−Range		
Prediction Interval Percent:			

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