

Table 19.2 PSP Project Plan Summary Instructions

Purpose	This form holds the estimated and actual project data in a convenient and readily retrievable form.
Header	Enter the following: <ul style="list-style-type: none"> - your name and today's date - the program name and number - the instructor's name - the language you will use to write the program
Minutes/LOC	Prior to development <ul style="list-style-type: none"> - enter the Minutes/LOC planned for this project. Use the To Date rate from the most recent previous program. After development <ul style="list-style-type: none"> - Divide the total development time by the actual program size to get the actual and To Date Minutes/LOC. - For example, if the project took 137 minutes and you produced 29 LOC, the Minutes/LOC would be $196/29 = 6.76$.
LOC/Hour	Prior to development <ul style="list-style-type: none"> - calculate the LOC per hour planned for this program by dividing 60 by the Plan Minutes/LOC. After development <ul style="list-style-type: none"> - For Actual and To Date LOC/Hour, divide 60 by the Actual and To Date Minutes/LOC. - For Actual Minutes/LOC of 4.89, Actual LOC/Hour are $60/6.76 = 8.88$.
Defects/KLOC	Prior to development <ul style="list-style-type: none"> - Find the defects/KLOC To Date on the most recent previous program. - Use this as the Plan Defects/KLOC for this project. After development <ul style="list-style-type: none"> - Calculate the defects/KLOC actual and To Date for this program. - For Actual, multiply the total actual defects by 1000 and divide by the Actual Total New & Changed LOC. - Make a similar calculation for To Date. - With 17 defects to date and 153 Total New & Changed LOC, defects/KLOC To Date = $1000*17/153=111.11$.
Yield	<ul style="list-style-type: none"> - Calculate the plan, actual, and to date yield. - Yield = $100*(\text{defects removed before compile})/(\text{defects injected before compile})$, so with 5 injected and 4 found, yield = $100*4/5=80.0\%$.
A/FR	Calculate the plan, actual, and To Date A/FR <ul style="list-style-type: none"> - For actual, for example, take the ratio of the actual code review time and divide by the sum of the actual compile and test times. - For review time of 29 minutes, compile time of 5 minutes, and test time of 10 minutes, $A/FR = 29/(5+10) = 1.93$.
Program Size (LOC)	Prior to development, enter under plan: <ul style="list-style-type: none"> - the estimated Total, Maximum, and Minimum New & Changed LOC. After Development: <ul style="list-style-type: none"> - Count and enter the Actual New & Changed LOC. - For To Date, add Actual New & Changed LOC to To Date New & Changed LOC for the previous program.

Table 19.2 (Continued)

Time in Phase - Plan	<ul style="list-style-type: none"> - For total development time, multiply Total New and Changed LOC by Minutes/LOC. - For Maximum time, multiply the Maximum size by Minutes/LOC. - For Minimum time, multiply the Minimum size by Minutes/LOC. - From the Project Plan Summary for the most recent program, find the To Date % values for each phase. - Using the To Date % from the previous program, calculate the plan time for each phase.
Time in Phase - Actual	<ul style="list-style-type: none"> - At job completion, enter the actual time in minutes spent in each development phase. - Get these data from the time log.
Time in Phase - To Date	<ul style="list-style-type: none"> - For each phase, enter the sum of actual time and To Date time from the most recent previous program.
Time in Phase - To Date %	<ul style="list-style-type: none"> - For each phase, enter 100 times the To Date time for that phase divided by the Total To Date time.
Defects Injected - Plan	<ul style="list-style-type: none"> - Before development, estimate the total number of defects to be injected in the program. - The value is Plan Defects/KLOC times the Plan Total New & Changed LOC for this program divided by 1000. - For example, with a Plan Defects/KLOC of 75.9 and a Plan New & Changed LOC of 75, Plan Total defects = $75.9 * 75 / 1000 = 5.69$, so use 6. - Before development, estimate the defects injected by phase using the estimate total defects and the To Date % defect injected distribution from the previous program.
Defects Injected - Actual	<ul style="list-style-type: none"> - After development, find and enter the actual number of defects injected in each phase.
Defects Injected - To Date	<ul style="list-style-type: none"> - For each phase, enter the sum of the actual defects and the To Date defects from the most recent program.
Defects Injected - To Date %	<ul style="list-style-type: none"> - For each phase, enter 100 times the To Date defects for that phase divided by the total To Date defects.
Defects Injected - Defects/hour	<ul style="list-style-type: none"> - Calculate the defects injected per hour for design and code. - For design, for example, multiply 60 times the design defects To Date and divide by the design time To Date = $60 * 5 / 195 = 1.54$ defects/hour.
Defects Removed - Plan	<ul style="list-style-type: none"> - In the total row, enter the estimated total defects. - Using the To Date % values from the most recent program, calculate the plan defects removed for each phase.
Defects Removed - Actual	<ul style="list-style-type: none"> - After development, find and enter the actual number of defects removed in each phase.
Defects Removed - To Date	<ul style="list-style-type: none"> - For each phase, enter the sum of the actual defects and the To Date defects from the most recent program.
Defects Removed - To Date %	<ul style="list-style-type: none"> - For each phase, enter 100 times the To Date defects for that phase divided by the total To Date defects.
Defects Removed - Defects/hour	<ul style="list-style-type: none"> - Calculate the defects removed per hour for code review, compile, and test. - For test, for example, multiply 60 times the test defects To Date and divide by the test time To Date = $60 * 6 / 279 = 1.29$ defects/hour.