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| PSP0 Process Script | |
| Purpose | To guide the development of module-level programs |
| Entry Criteria | * Problem description * PSP0 Project Plan Summary form * Time and Defect Recording logs * Defect Type standard * Stopwatch (optional) |

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| Step | Activities | Description |
| 1 | Planning | * Produce or obtain a requirements statement. * Estimate the required development time. * Enter the plan data in the Project Plan Summary form. * Complete the Time Recording log. |
| 2 | Development | * Design the program. * Implement the design. * Compile the program, and fix and log all defects found. * Test the program, and fix and log all defects found. * Complete the Time Recording log. |
| 3 | Postmortem | Complete the Project Plan Summary form with actual time, defect, and size data. |

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| Exit Criteria | * A thoroughly tested program * Completed Project Plan Summary form with estimated and actual data * Completed Time and Defect Recording logs |

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| PSP0 Planning Script | |
| Purpose | To guide the PSP planning process |
| Entry Criteria | * Problem description * Project Plan Summary form * Time Recording log |

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| Step | Activities | Description |
| 1 | Program  Requirements | * Produce or obtain a requirements statement for the program. * Ensure that the requirements statement is clear and unambiguous. * Resolve any questions. |
| 2 | Resource  Estimate | * Make your best estimate of the time required to develop this program. * Enter the plan time data in the Project Plan Summary form. |

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| Exit Criteria | * Documented requirements statement * Completed Project Plan Summary form with estimated development time data * Completed Time Recording log |

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| PSP0 Development Script | |
| Purpose | To guide the development of small programs |
| Entry Criteria | * Requirements statement * Project Plan Summary form with estimated program development time * Time and Defect Recording logs * Defect Type standard |

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| Step | Activities | Description |
| 1 | Design | * Review the requirements and produce a design to meet them. * Record in the Defect Recording log any requirements defects found. * Record time in the Time Recording log. |
| 2 | Code | * Implement the design. * Record in the Defect Recording log any requirements or design defects found. * Record time in the Time Recording log. |
| 3 | Compile | * Compile the program until there are no compile errors. * Fix all defects found. * Record defects in the Defect Recording log. * Record time in the Time Recording log. |
| 4 | Test | * Test until all tests run without error. * Fix all defects found. * Record defects in the Defect Recording log. * Record time in the Time Recording log. |

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| Exit Criteria | * A thoroughly tested program * Completed Time and Defect Recording logs |

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| PSP0 Postmortem Script | |
| Purpose | To guide the PSP postmortem process |
| Entry Criteria | * Problem description and requirements statement * Project Plan Summary form withdevelopment timedata * Completed Time and Defect Recording logs * A tested and running program |

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| Step | Activities | Description |
| 1 | Defect Recording | * Review the Project Plan Summary to verify that all of the defects found in each phase were recorded. * Using your best recollection, record any omitted defects. |
| 2 | Defect Data Consistency | * Check that the data on every defect in the Defect Recording log are accurate and complete. * Verify that the numbers of defects injected and removed per phase are reasonable and correct. * Using your best recollection, correct any missing or incorrect defect data. |
| 3 | Time | * Review the completed Time Recording log for errors or omissions. * Using your best recollection, correct any missing or incomplete time data. |

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| Exit Criteria | * A thoroughly tested program * Completed Project Plan Summary form * Completed Time and Defect Recording logs |

**PSP0 Project Plan Summary**

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| Student |  | Date |  |
| Program |  | Program # |  |
| Instructor |  | Language |  |

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| **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 |  |  |  |  |  |  |  |

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| PSP0 Plan Summary Instructions | |  |
| Purpose | To hold the plan and actual data for programs or program parts | |
| General | “To Date” is the total actual to-date values for all products developed. | |
| Header | * Enter your name and the date. * Enter the program name and number. * Enter the instructor’s name and the programming language you are using. | |
| Time in Phase | * Enter the estimated total development time. * Enter the actual time by phase and the total time. * To Date: Enter the sum of the actual times for this program plus the to-date times from the most recently developed program. * To Date %: Enter the percentage of to-date time in each phase. | |
| Defects Injected | * Enter the actual defects by phase and the total actual defects. * To Date: Enter the sum of the actual defects injected by phase and the to-date values for the most recent previously developed program. * To Date %: Enter the percentage of the to-date defects injected by phase. | |
| Defects Removed | * To Date: Enter the actual defects removed by phase plus the to-date values for the most recent previously developed program. * To Date %: Enter the percentage of the to-date defects removed by phase. * After development, record any defects subsequently found during program testing, use, reuse, or modification. | |

PSP Time Recording Log

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| --- | --- | --- | --- |
| Student |  | Date |  |
| Program |  | Program # |  |
| Instructor |  | Language |  |

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| **Project** | **Phase** | **Start Date and Time** | **Int. Time** | **Stop Date and Time** | **Delta**  **Time** | **Comments** |
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Time Recording Log Instructions

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| Purpose | * Use this form to record the time you spend on each project activity. * For the PSP, phases often have only one activity; larger projects usually have multiple activities in a single process phase. * These data are used to complete the Project Plan Summary. * Keep separate logs for each program. |
| General | * Record all of the time you spend on the project. * Record the time in minutes. * Be as accurate as possible. * If you need additional space, use another copy of the form. * If you forget to record the starting, stopping, or interruption time for an activity, promptly enter your best estimate. |
| Header | * Enter your name and the date. * Enter the program name and number. * Enter the instructor’s name and the programming language you are using. |
| Project | Enter the program name or number. |
| Phase | Enter the name of the phase for the activity you worked on, e.g. Planning, Design, Test. |
| Start Date and Time | Enter the date and time when you start working on a process activity. |
| Interruption Time | * Record any interruption time that was not spent on the process activity. * If you have several interruptions, enter their total time. * You may enter the reason for the interrupt in comments. |
| Stop Date and Time | Enter the date and time when you stop working on that process activity. |
| Delta Time | Enter the clock time you actually spent working on the process activity, less the interruption time. |
| Comments | Enter any other pertinent comments that might later remind you of any unusual circumstances regarding this activity. |

PSP Defect Recording Log

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| Defect Types |  |
| 10 Documentation | 60 Checking |
| 20 Syntax | 70 Data |
| 30 Build, Package | 80 Function |
| 40 Assignment | 90 System |
| 50 Interface | 100 Environment |

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| --- | --- | --- | --- |
| Student |  | Date |  |
| Program |  | Program # |  |
| Instructor |  | Language |  |

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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Description: | | |  | | | | | | | | | | | | | |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
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PSP Defect Recording Log Instructions

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| Purpose | * Use this form to hold data on the defects that you find and correct. * These data are used to complete the Project Plan Summary form. |
| General | * Record each defect separately and completely. * If you need additional space, use another copy of the form. |
| Header | * Enter your name and the date. * Enter the program name and number. * Enter the instructor’s name and the programming language you are using. |
| Project | * Give each program a different name or number. * For example, record test program defects against the test program. |
| Date | Enter the date on which you found the defect. |
| Number | * Enter the defect number. * For each program or module, use a sequential number starting with 1 (or 001, etc.). |
| Type | * Enter the defect type from the defect type list summarized in the top left corner of the form. * Use your best judgment in selecting which type applies. |
| Inject | * Enter the phase when this defect was injected. * Use your best judgment. |
| Remove | Enter the phase during which you fixed the defect. (This will generally be the phase when you found the defect.) |
| Fix Time | * Enter the time that you took to find and fix the defect. * This time can be determined by stopwatch or by judgment. |
| Fix Ref. | * If you or someone else injected this defect while fixing another defect, record the number of the improperly fixed defect. * If you cannot identify the defect number, enter an X. |
| Description | Write a succinct description of the defect that is clear enough to later remind you about the error and help you to remember why you made it. |

PSP Defect Type Standard

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| --- | --- | --- |
| **Type Number** | **Type Name** | **Description** |
| 10 | Documentation | Comments, messages |
| 20 | Syntax | Spelling, punctuation, typos, instruction formats |
| 30 | Build, Package | Change management, library, version control |
| 40 | Assignment | Declaration, duplicate names, scope, limits |
| 50 | Interface | Procedure calls and references, I/O, user formats |
| 60 | Checking | Error messages, inadequate checks |
| 70 | Data | Structure, content |
| 80 | Function | Logic, pointers, loops, recursion, computation, function defects |
| 90 | System | Configuration, timing, memory |
| 100 | Environment | Design, compile, test, or other support system problems |