**PSP2 Project Plan Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Summary** | **Plan** | | |  | | | **Actual** | | | |  | | **To Date** | | | |
| Size/Hour | 438/4.2 | | |  | | | 323/5.5 | | | |  | | 106.9+58.7=  165.6 | | | |
| Planned Time | 250.3 min | | |  | | |  | | | |  | | 180+250.3=430.3 | | | |
| Actual Time |  | | |  | | | 329 | | | |  | | 140+329=469 | | | |
| CPI (Cost-Performance Index) |  | | |  | | |  | | | |  | | 1.3+(250.3/329)=2.1 | | | |
|  |  | | |  | | |  | | | |  | | (Planned/Actual) | | | |
| % Reused | 30% | | |  | | | 43.9% | | | |  | | 15.6% | | | |
| % New Reusable | 40% | | |  | | | 73.9% | | | |  | | 10.6% | | | |
| ***Test Defects/KLOC or equivalent*** | (1000\*5)/268=18.6 | | |  | | | (1000\*3)/96=  31.25 | | | |  | | 31.25 | | | |
| ***Total Defects/KLOC or equivalent*** | (1000\*5)/268=18.6 | | |  | | | (1000\*3)/96=  31.25 | | | |  | | 31.25 | | | |
| ***Yield %*** | 80% | | |  | | | 100% | | | |  | | 100% | | | |
|  |  | | |  | | |  | | | |  | |  | | | |
| **Program Size** | **Plan** | | |  | | | **Actual** | | | |  | | **To Date** | | | |
| Base (B) | 111 | | |  | | | 111 | | | |  | |  | | | |
|  | (Measured) | | |  | | | (Measured) | | | |  | |  | | | |
| Deleted (D) | 20 | | |  | | | 22 | | | |  | |  | | | |
|  | (Estimated) | | |  | | | (Counted) | | | |  | |  | | | |
| Modified (M) | 3 | | |  | | | 4 | | | |  | |  | | | |
|  | (Estimated) | | |  | | | (Counted) | | | |  | |  | | | |
| Added (A) | 265 | | | |  | 92 | | | |  | |  | | | |
|  | (A+M − M) | | | |  | (T − B + D − R) | | | |  | |  | | | |
| Reused (R) | 82 | | | |  | 142 | | | |  | | 26+142=168 | | | |
|  | (Estimated) | | | |  | (Counted) | | | |  | |  | | | |
| Added and Modified (A+M) | 268 | | | |  | 96 | | | |  | | 752+96=848 | | | |
|  | (Projected) | | | |  | (A + M) | | | |  | |  | | | |
| Total Size (T) | 277 | | | |  | 323 | | | |  | | 757+323=1080 | | | |
|  | (A+M + B − M − D + R) | | | |  | (Measured) | | | |  | |  | | | |
| Total New Reusable | 40 | | | |  | 71 | | | |  | | 19+71=90 | | | |
|  |  | | | |  |  | | | |  | |  | | | |
| Estimated Proxy Size (E) | 268 | | | |  |  | | | |  | |  | | | |
|  |  | | | |  |  | | | |  | |  | | | |
| **Time in Phase (min.)** | **Plan** |  | **Actual** | | | | |  | **To Date** | | | | |  | **To Date %** |
| Planning | 14.7 |  | 9 | | | | |  | 53+9=62 | | | | |  | 5.4 |
| Design | 12.5 |  | 14 | | | | |  | 45+14=59 | | | | |  | 5.1 |
| ***Design Review*** | 10 |  | 8 | | | | |  | 8 | | | | |  | 0.7 |
| Code | 137.5 |  | 231 | | | | |  | 495+231=  726 | | | | |  | 62.7 |
| ***Code Review*** | 10 |  | 11 | | | | |  | 11 | | | | |  | 0.9 |
| Compile | 0 |  | 0 | | | | |  | 0+0=0 | | | | |  | 0 |
| Test | 20.7 |  | 11 | | | | |  | 74+11=85 | | | | |  | 7.3 |
| Postmortem | 44.9 |  | 45 | | | | |  | 162+45=  207 | | | | |  | 17.9 |
| Total | 250.3 |  | 329 | | | | |  | 1158 | | | | |  | 100 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Defects Injected** | ***Plan*** |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Design | 1 |  | 1 | | |  | 3+1=4 | | |  | 21.0 |
| ***Design Review*** | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Code | 3 |  | 2 | | |  | 10+2=12 | | |  | 63.2 |
| ***Code Review*** | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Compile | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Test | 1 |  | 0 | | |  | 3+0=3 | | |  | 15.8 |
| Total Development | 5 |  | 3 | | |  | 19 | | |  | 100 |
|  |  |  |  | | |  |  | | |  |  |
| **Defects Removed** | ***Plan*** |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Design | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| ***Design Review*** | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Code | 4 |  | 3 | | |  | 13+3=16 | | |  | 84.2 |
| ***Code Review*** | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Compile | 0 |  | 0 | | |  | 0+0=0 | | |  | 0 |
| Test | 1 |  | 0 | | |  | 3+0=3 | | |  | 15.8 |
| Total Development | 5 |  | 3 | | |  | 19 | | |  | 100 |
| After Development | 0 |  | 0 | | |  | 0+0=0 | | |  |  |
|  |  | | |  |  | | |  |  | | |
| ***Defect Removal Efficiency*** | ***Plan*** | | |  | ***Actual*** | | |  | ***To Date*** | | |
| ***Defects/Hour − Design Review*** | 1/0.17 | | |  | 0 | | |  | 0 | | |
| ***Defects/Hour − Code Review*** | 4/0.17 | | |  | 0 | | |  | 0 | | |
| ***Defects/Hour − Compile*** | 0 | | |  | 0 | | |  | 0 | | |
| ***Defects/Hour − Test*** | 1 | | |  | 0 | | |  | 0 | | |
| ***DRL (DLDR/UT)*** |  | | |  |  | | |  |  | | |
| ***DRL (Code Review/UT)*** |  | | |  |  | | |  |  | | |
| ***DRL (Compile/UT)*** | 0 | | |  | 0 | | |  | 0 | | |

• En rojo lo que viene del programa anterior.

**Test Report Template**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |

|  |  |
| --- | --- |
| Test Name/Number | testDatos1/001 |
| Test Objective | Verificar que se esta realizando correctamente la regla de Simpson |
|  |  |
| Test Description | Comprobar que de acuerdo a los datos de entrada, se este calculando |
|  | correctamente la regla de Simpson, de acuerdo con la función t distribution. |
|  |  |
|  |  |
|  |  |
| Test Conditions | Datos de entrada: (x= 1.1, dof= 9, numSeg= 10) |
|  |  |
|  |  |
|  |  |
|  |  |
| Expected Results | 0,35006 |
|  |  |
|  |  |
|  |  |
| Actual Results | 0,35006 |
|  |  |
|  |  |
|  |  |
|  |  |
| Test Name/Number | testDatos2/002 |
| Test Objective | Verificar que se esta realizando correctamente la regla de Simpson |
|  |  |
| Test Description | Comprobar que de acuerdo a los datos de entrada, se este calculando |
|  | correctamente la regla de Simpson, de acuerdo con la función t distribution. |
|  |  |
|  |  |
|  |  |
| Test Conditions | Datos de entrada: (x= 1.1812, dof= 10, numSeg= 10) |
|  |  |
|  |  |
|  |  |
|  |  |
| Expected Results | 0,36757 |
|  |  |
|  |  |
|  |  |
| Actual Results | 0,36757 |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |
| --- | --- |
| Test Name/Number | testDatos3/003 |
| Test Objective | Verificar que se esta realizando correctamente la regla de Simpson |
|  |  |
| Test Description | Comprobar que de acuerdo a los datos de entrada, se este calculando |
|  | correctamente la regla de Simpson, de acuerdo con la función t distribution. |
|  |  |
|  |  |
|  |  |
| Test Conditions | Datos de entrada: (x= 2.750, dof= 30, numSeg= 10) |
|  |  |
|  |  |
|  |  |
|  |  |
| Expected Results | 0,49500 |
|  |  |
|  |  |
|  |  |
| Actual Results | 0,49500 |
|  |  |
|  |  |
|  |  |
|  |  |

**PSP2 Design Review Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Items** | **Respuesta** | | | |
| Si | No | N/A | Comentarios |
| Completitud | Verificar que el diseño cumpla con todos los requerimientos solicitados.  Verificar que todas las salidas necesarias sean producidas | X |  |  |  |
| Orden | Las clases se diseñaran, en orden de: definir clases, variables, constructores y metodos. | X |  |  |  |
| Uso funcional | Verificar que todos las clases, métodos, funciones y variables sean utilizadas y sean entendibles. | X |  |  |  |
| Nombres | Todos los nombres de las clases, métodos, funciones y variables son claros.  No deben ser abreviaturas. | X |  |  |  |
| Estándar | Asegurarse que el diseño de las clases correspondan al paradigma OO. | X |  |  |  |

**Code Review Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Items** | **Respuesta** | | | |
| Si | No | N/A | Comentarios |
| Completitud | Verificar que todo lo diseñado haya quedado plasmado en el código. | X |  |  |  |
| Imports | Tener todos los imports necesarios | X |  |  |  |
| Inicialización | Verificar inicialización de:  - Clases  - Metodos  - Variables | X |  |  |  |
| Llamados | Verificar llamados de metodos y constructores, tengan todos los parametros y tipos correspondientes | X |  |  |  |
| Parejas | Verificar que exista una pareja de: {}, [], () que sea correspondiente. | X |  |  |  |
| Operadores Lógicos | Verificar el uso apropiado de los operadores ==, =, ||, y demás. | X |  |  |  |
| Identación | Verificar que el código este identado correctamente. | X |  |  |  |
| Estándar | El código cumple con lo definido en la codificación estándar. | X |  |  |  |
| Javadoc | Verificar que todos las clases y metodos tengan Javadoc | X |  |  |  |

PSP Process Improvement Proposal (PIP)

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |

|  |
| --- |
| Problem Description |
| Briefly describe the problems that you encountered. |
|  |
| Tal vez, uno de los problemas encontrados, es la cantidad de datos que se deben enviar de la fase previa |
| a la fase actual, para realizar los diferentes calculos. Ya que esto es una tarea humana se puede |
| incurrir en muchos errores y dañar o alterar el resultado de los valores de la fase actual. |
|  |
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|  |
| Proposal Description |
| Briefly describe the process improvements that you propose. |
|  |
| Para cada etapa del PSP, armar de antemano el documento con cada uno los formatos propios de cada |
| fase. |
|  |
|  |
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|  |
| Other Notes and Comments |
| Note any other comments or observations that describe your experiences or improvement ideas. |
|  |
| Documentar com mayor detalle todos los metodos y clases que puede ser reusables, para esto utilizar |
| Javadoc. |
|  |
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|  |

**Size Estimating Template**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |
| Size Measure | LOC |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Estimated** | | | | | | | | | | | |
| **Base Parts** |  | **Base** | |  | **Deleted** | |  | **Modified** | | |  | **Added** | |
| Data.java |  | 26 | |  | 0 | |  | 1 | | |  | 0 | |
| HallarValores.java |  | 0 | |  | 0 | |  | 0 | | |  | 100 | |
| PrincipalIntegral.java |  | 85 | |  | 20 | |  | 2 | | |  | 25 | |
| AppTest.java |  | 0 | |  | 0 | |  | 0 | | |  | 50 | |
| **Total** | **B** | | 111 | **D** | | 20 | **M** | | 3 | **BA** | | | 175 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Actual** | | | | | | | | | | |
| **Base Parts** |  | **Base** | |  | **Deleted** | |  | **Modified** | |  | **Added** | |
| Data.java |  | 26 | |  | 0 | |  | 1 | |  | 45 | |
| HallarValores.java |  | 0 | |  | 0 | |  | 0 | |  | 135 | |
| PrincipalIntegral.java |  | 85 | |  | 22 | |  | 3 | |  | 27 | |
| AppTest.java |  | 0 | |  | 0 | |  | 0 | |  | 27 | |
| **Total** |  | | 111 |  | | 22 |  | | 4 |  | | 234 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Estimated** | | | | | | | |  | **Actual** | | |
| **Parts Additions** |  | **Type** |  | **Items** |  | **Rel. Size** | |  | **Size\*** |  | **Size\*** |  | **Items** |
| HallarValores.java |  | Calc. |  | 7 |  | S | |  | 40\* |  | 71\* |  | 6 |
| AppTest.java |  | Test. |  | 4 |  | M | |  | 50 |  | 27 |  | 3 |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
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| **Total** |  |  |  |  |  |  | **PA** | | 90 |  | 98 |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | |  | **Estimated** |  | **Actual** |
| **Reused Parts** | |  | **Size** |  | **Size** |
| Data.java | |  | 26 |  | 71 |
| HallarValores.java | |  | 56 |  | 71 |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
| **Total** | **R** | | 82 |  | 142 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Program** | **LOC estimado** | **LOC REAL** | | program2 | 220 | 274 | | program3 | 180 | 252 | | program4 | 265 | 246 |  |  |  |  |  | | --- | --- | --- | --- | | β0 | β1 | R2 | R | | 274,5702 | -0,0781 | 0,0472 | 0.2173 |  |  |  |  | | --- | --- | --- | | **Program** | **Tiempo estimado** | **Tiempo real** | | Program1 | 180 | 171 min | | program2 | 300 | 308 min | | program3 | 240 | 210 min | | program4 | 180 | 140 min |  |  |  |  |  | | --- | --- | --- | --- | | β0 | β1 | R2 | R | | -71,2727 | 1,2379 | 0,9484 | 0.974 |   **PROBE Calculation Worksheet (Added and Modified)** |  | Size |  | Time |
| Added size (A): A = BA+PA |  | 265 |  |  |
| Estimated Proxy Size (E): E = BA+PA+M |  | 268 |  |  |
| PROBE estimating basis used: (A, B, C, or D) |  | C |  | A |
| Correlation: (R2) |  |  |  | 0.9484 |
| Regression Parameters: β0 Size and Time |  | 0 |  | -71.3 min |
| Regression Parameters: β1 Size and Time |  | 1.0 |  | 1.2 min |
| Projected Added and Modified Size (P): P = β0size + β1size\*E |  | 268 |  |  |
| Estimated Total Size (T): T = P + B - D - M + R |  | 438 |  |  |
| Estimated Total New Reusable (NR): sum of \* items |  | 40 |  |  |
| Estimated Total Development Time: Time = β0time + β1time\*E |  |  |  | 250.3 min |
| Prediction Range: Range |  | 70% |  |  |
| Upper Prediction Interval: UPI = P + Range |  | 455.6 |  |  |
| Lower Prediction Interval: LPI = P - Range |  | 80.4 |  |  |
| Prediction Interval Percent: |  |  |  |  |

**PSP Time Recording Log**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | José Javier Virviescas Toledo | Date | 21/02/2015 |
| Program | Program5 | Program # | 5 |
| Instructor | Luis Daniel Benavides Navarro | Language | JAVA |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project** | **Phase** | **Start Date and Time** | **Int. Time** | **Stop Date and Time** | **Delta**  **Time** | **Comments** |
| Integral | Planing | 21/02/2015  09:06 am |  | 21/02/2015  09:15 am | 9 |  |
|  | Design | 22/02/2015  08:50 am |  | 22/02/2015  09:04 am | 14 |  |
|  | Design Review | 22/02/2015  09:37 am |  | 22/02/2015  09:45 am | 8 |  |
|  | Code | 22/02/2015  10:17 am | 25 | 22/02/2015  12:13 pm | 91 |  |
|  | Code | 22/02/2015  03:16 pm | 30 | 22/02/2015  06:06 pm | 140 |  |
|  | Code Review | 22/0/2/2015  06:10 pm |  | 22/02/2015  06:21 pm | 11 |  |
|  | Test | 22/02/2015  08:29 pm |  | 22/02/2015  08:40 pm | 11 |  |
|  | Postmortem | 22/02/2015  09:00 pm |  | 22/02/2015  9:45pm | 45 |  |
|  |  |  |  |  |  |  |
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**PSP Defect Recording Log**

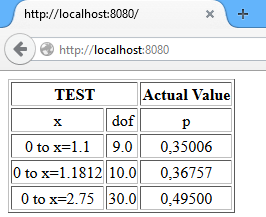
|  |  |
| --- | --- |
| Defect Types |  |
| 10 Documentation | 60 Checking |
| 20 Syntax | 70 Data |
| 30 Build, Package | 80 Function |
| 40 Assignment | 90 System |
| 50 Interface | 100 Environment |

|  |  |  |  |
| --- | --- | --- | --- |
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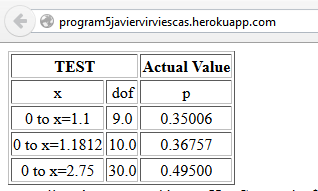
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
| Integral |  | | 22/02/2015 |  | 1 |  | 80 |  | Desing |  | Code |  | 2 |  |  |
| Description: | | | Error en la etapa de diseño, se pensó pasar parametro a parametro según fuera necesario | | | | | | | | | | | | | |
| para el método reglaSimpson, finalmente se dejo un solo parametro de tipo Data. | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
| Integral |  | | 22/02/2015 |  | 2 |  | 50 |  | Data |  | Data |  | 1 |  |  |
| Description: | | | Error visualizando de la tabla que muestra el resultado, los campos estaban corridos. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| Project |  | | Date |  | Number |  | Type |  | Inject |  | Remove |  | Fix Time |  | Fix Ref. |
| Integral |  | | 22/02/2015 |  | 3 |  | 80 |  | Data |  | Data |  | 2 |  |  |
| Description: | | | Error obteniendo el tamaño de los segmentos que se iban a tomar para realizar el calculo. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |

**Test Results:**

Prueba local:

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Prueba Heroku:



Pruebas Unitarias:

