METÁFORA

Controlador

Gestiona para la vista la información tomada de las clases del mundo

Mundo

Contiene las clases que ejecutan la lógica en la Integración

**IntegracionControlador**

**App**

**Calculo**

**Integracion**

Presentación

Muestra en pantalla los resultados retornados por el cálculo

**PaintingText**

**PaintingWeb**

PSP2.1 Project Plan Summary

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Summary** | | **Plan** | | |  | **Actual** | | |  | **To Date** | | |
| Size/Hour | | 20 | | |  | 15 | | |  | 15 | | |
| Planned Time | | 40 | | |  |  | | |  | 1368 | | |
| Actual Time | |  | | |  | 45 | | |  | 1493 | | |
| CPI (Cost-Performance Index) | |  | | |  |  | | |  | 0,88888 | | |
|  | |  | | |  |  | | |  | (Planned/Actual) | | |
| % Reuse | | 90 | | |  | 85 | | |  | 85 | | |
| % New Reusable | | 40 | | |  | 40 | | |  | 40 | | |
| Test Defects/KLOC or equivalent | | 0 | | |  | 1 | | |  | 14 | | |
| Total Defects/KLOC or equivalent | | 0,043 | | |  | 0,0045 | | |  | 0,35 | | |
| Yield % | | 0 | | |  | 1 | | |  | 14 | | |
| ***% Appraisal COQ*** | | 20 | | |  | 30 | | |  | 30 | | |
| ***% Failure COQ*** | | 10 | | |  | 10 | | |  | 10 | | |
| ***COQ A/F Ratio*** | | 2 | | |  | 3 | | |  | 3 | | |
| Proporción de tiempo gastado en tareas de evaluación con respecto al tiempo invertido en tareas de corrección de fallas  ***PQI*** | | 0,8 | | |  | 0,7 | | |  | 0,7 | | |
| Indice de calidad del procesos | |  | | |  |  | | |  |  | | |
| **Program Size** | | **Plan** | | |  | **Actual** | | |  | **To Date** | | |
| Base (B) | | 179 | | |  | 191 | | |  |  | | |
|  | | (Measured) | | |  | (Measured) | | |  |  | | |
| Deleted (D) | | 1 | | |  | 4 | | |  |  | | |
|  | | (Estimated) | | |  | (Counted) | | |  |  | | |
| Modified (M) | | 12 | | |  | 13 | | |  |  | | |
|  | | (Estimated) | | |  | (Counted) | | |  |  | | |
| Added (A) | 14 | | | |  | 18 | | |  |  | | |
|  | (A+M − M) | | | |  | (T − B + D − R) | | |  |  | | |
| Reused (R) | 78 | | | |  | 162 | | |  | 174 | | |
|  | (Estimated) | | | |  | (Counted) | | |  |  | | |
| Added and Modified (A+M) | 26 | | | |  | 31 | | |  | 100 | | |
|  | (Projected) | | | |  | (A + M) | | |  |  | | |
| Total Size (T) | 270 | | | |  | 209 | | |  | 314 | | |
|  | (A+M + B − M − D + R) | | | |  | (Measured) | | |  |  | | |
| Total New Reusable | 78 | | | |  | 162 | | |  | 174 | | |
|  |  | | | |  |  | | |  |  | | |
| Estimated Proxy Size (E) | 80 | | | |  |  | | |  |  | | |
|  | |  | | |  |  | | |  |  | | |
| ***Upper Prediction Interval (70%)*** | |  | | |  |  | | |  |  | | |
| ***Lower Prediction Interval (70%)*** | |  | | |  |  | | |  |  | | |
|  | |  |  |  | | |  |  | | |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Time in Phase (min.)** | **Plan** |  | | **Actual** | | | | |  | | **To Date** | | |  | | **To Date %** | |
| Planning | 15 |  | | 30 | | | | |  | | 86 | | |  | | 5,36 | |
| Design | 15 |  | | 10 | | | | |  | | 48 | | |  | | 2,99 | |
| Design Review | 15 |  | | 10 | | | | |  | | 10 | | |  | | 0,62 | |
| Code | 80 |  | | 120 | | | | |  | | 743 | | |  | | 46,35 | |
| Code Review | 15 |  | | 20 | | | | |  | | 20 | | |  | | 1,25 | |
| Compile | 0 |  | | 0 | | | | |  | | 0 | | |  | | 0,00 | |
| Test | 15 |  | | 27 | | | | |  | | 65 | | |  | | 4,05 | |
| Postmortem | 40 |  | | 120 | | | | |  | | 633 | | |  | | 39,49 | |
| Total | 195 |  | | 462 | | | | |  | | 1603 | | |  | | 100 | |
| ***Total Time UPI (70%)*** |  |  | |  | | | | |  | |  | | |  | |  | |
| ***Total Time LPI (70%)*** |  |  | |  | | | | |  | |  | | |  | |  | |
|  |  | |  | |  | | |  | |  | | | | |  | |  |
| **Defects Injected** | **Plan** | |  | | **Actual** | | |  | | **To Date** | | | | |  | | **To Date %** |
| Planning |  | |  | |  | | |  | |  | | | | |  | |  |
| Design |  | |  | |  | | |  | |  | | | | |  | |  |
| Design Review |  | |  | |  | | |  | |  | | | | |  | |  |
| Code | 0 | |  | | 1 | | |  | | 14 | | | | |  | | 93,333 |
| Code Review | 0 | |  | | 1 | | |  | | 1 | | | | |  | | 6,6666 |
| Compile |  | |  | |  | | |  | |  | | | | |  | |  |
| Test |  | |  | |  | | |  | |  | | | | |  | |  |
| Total Development |  | |  | |  | | |  | |  | | | | |  | |  |
|  |  | |  | |  | | |  | |  | | | | |  | |  |
| **Defects Removed** | **Plan** | |  | | **Actual** | | |  | | **To Date** | | | | |  | | **To Date %** |
| Planning |  | |  | |  | | |  | |  | | | | |  | |  |
| Design |  | |  | |  | | |  | |  | | | | |  | |  |
| Design Review |  | |  | |  | | |  | |  | | | | |  | |  |
| Code | 0 | |  | | 1 | | |  | | 14 | | | | |  | | 93,333 |
| Code Review | 0 | |  | | 1 | | |  | | 1 | | | | |  | | 6,6666 |
| Compile |  | |  | |  | | |  | |  | | | | |  | |  |
| Test |  | |  | |  | | |  | |  | | | | |  | |  |
| Total Development |  | |  | |  | | |  | |  | | | | |  | |  |
| After Development |  | |  | |  | | |  | |  | | | | |  | |  |
|  |  | | | | |  |  | | | | |  |  | | | | |
| **Defect Removal Efficiency** | **Plan** | | | | |  | **Actual** | | | | |  | **To Date** | | | | |
| Defects/Hour − Design Review | 0 | | | | |  | 0 | | | | |  | 0 | | | | |
| Defects/Hour − Code Review | 0 | | | | |  | 1 | | | | |  | 1 | | | | |
| Defects/Hour − Compile | 0 | | | | |  | 0 | | | | |  | 0 | | | | |
| Defects/Hour − Test | 0 | | | | |  | 1 | | | | |  | 1 | | | | |
| DRL (DLDR/UT) | 0 | | | | |  | 1 | | | | |  | 1 | | | | |
| DRL (Code Review/UT) | 0 | | | | |  | 1 | | | | |  | 1 | | | | |
| DRL (Compile/UT) | 0 | | | | |  | 0 | | | | |  | 1 | | | | |

Size Estimating Template

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |
| --- | --- |
| Size Measure |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Estimated | | | | | | | | | | | |
| Base Parts |  | Base | |  | Deleted | |  | Modified | | |  | Added | |
| Calculo |  | 60 | |  | 0 | |  | 0 | | |  | 5 | |
| App |  | 30 | |  | 1 | |  | 4 | | |  | 4 | |
| IntegracionControlador |  | 45 | |  | 0 | |  | 2 | | |  | 0 | |
| PaintingText |  | 6 | |  | 0 | |  | 4 | | |  | 0 | |
| PaintingWeb |  | 30 | |  | 0 | |  | 4 | | |  | 0 | |
| Integracion |  | 8 | |  | 0 | |  | 0 | | |  | 0 | |
| Total | B | | 179 | D | | 1 | M | | 12 | **BA** | | | 14 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Actual | | | | | | | | | | |
| Base Parts |  | Base | |  | Deleted | |  | Modified | |  | Added | |
| Calculo |  | 68 | |  | 0 | |  | 0 | |  | 10 | |
| App |  | 30 | |  | 4 | |  | 2 | |  | 4 | |
| IntegracionControlador |  | 45 | |  | 0 | |  | 5 | |  | 0 | |
| PaintingText |  | 6 | |  | 0 | |  | 1 | |  | 0 | |
| PaintingWeb |  | 30 | |  | 0 | |  | 5 | |  | 0 | |
| Integracion |  | 12 | |  | 0 | |  | 0 | |  | 4 | |
|  |  |  | |  |  | |  |  | |  |  | |
|  |  |  | |  |  | |  |  | |  |  | |
|  |  |  | |  |  | |  |  | |  |  | |
| Total |  | | 191 |  | | 4 |  | | 13 |  | | 8 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Estimated | | | | | | | |  | Actual | | |
| Parts Additions |  | Type |  | Items |  | Rel. Size | |  | Size\* |  | Size\* |  | Items |
| App |  | Controller |  | 1 |  | L | |  | 30 |  | 30 |  | 1 |
| IntegracionControlador |  | Controller |  | 3 |  | L | |  | 45 |  | 45 |  | 3 |
| Calculo |  | Calculo |  | 6 |  | L | |  | 60 |  | 68 |  | 6 |
| Integracion |  | Calculo |  | 6 |  | M | |  | 8 |  | 31 |  | 6 |
| PaintingText |  | Presentación |  | 2 |  | S | |  | 6 |  | 6 |  | 2 |
| PaintingWeb |  | Presentación |  | 2 |  | S | |  | 30 |  | 30 |  | 2 |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Total |  |  |  |  |  |  | PA | | 179 |  | 210 |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | Estimated | |  | Actual | |
| Reused Parts | |  | Size | |  | Size | |
| App | |  | 30 | |  | 30 | |
| IntegracionControlador | |  | 45 | |  | 45 | |
| Calculo | |  | 60 | |  | 68 | |
| Integracion | |  | 8 | |  | 31 | |
| PaintingText | |  | 6 | |  | 6 | |
| PaintingWeb | |  | 30 | |  | 30 | |
|  | |  |  | |  |  | |
| Total | R | | 179 | |  | 210 | |
| PROBE Calculation Worksheet (Added and Modified) | | |  | | Size |  | | Time |
|  | | |  | |  |  | |  |
| Added size (A): A = BA+PA | | |  | | 193 |  | |  |
| Estimated Proxy Size (E): E = BA+PA+M | | |  | | 205 |  | |  |
| PROBE estimating basis used: (A, B, C, or D) | | |  | | C |  | | C |
| Correlation: (R2) | | |  | |  |  | |  |
| Regression Parameters: β0 Size and Time | | |  | | 0 |  | | 0 |
| Regression Parameters: β1 Size and Time actual total added and modified size to date/plan total added and modified size to date | | |  | | 0,12 |  | |  |
| Projected Added and Modified Size (P): P = β0size + β1size\*E | | |  | | 41 |  | |  |
| Estimated Total Size (T): T = P + B - D - M + R | | |  | | 285 |  | |  |
| Estimated Total New Reusable (NR): sum of \* items | | |  | | 20 |  | |  |
| Estimated Total Development Time: Time = β0time + β1time\*E | | |  | |  |  | |  |
| Prediction Range: Range | | |  | |  |  | |  |
| Upper Prediction Interval: UPI = P + Range | | |  | |  |  | |  |
| Lower Prediction Interval: LPI = P - Range | | |  | |  |  | |  |
| Prediction Interval Percent: | | |  | |  |  | |  |

**Time Recording Log**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project** | **Phase** | **Start Date and Time** | **Int. Time** | **Stop Date and Time** | **Delta Time** | **Comments** |
| Psp2.1 | Planning | 01/03/2015 09:00 |  | 01/03/2015 09:30 | 30 |  |
|  | Design | 01/03/2015 09:10 |  | 01/03/2015 09:20 | 10 |  |
|  | Revisión diseño | 02/03/2015 22:30 |  | 02/03/2015 22:40 | 10 |  |
|  | Test | 02/03/2015 22:40 |  | 02/03/2015 22:45 | 5 | Correción diseño |
|  | Code | 02/03/2015 22:45 |  | 02/03/2015 23:45 | 60 |  |
|  | Code | 03/03/2015 22:15 |  | 03/03/2015 23:15 | 60 |  |
|  | Revisión código | 04/03/2015 22:20 |  | 04/03/2015 22:40 | 20 |  |
|  | Comp | - |  | - |  | - |
|  | Test | 03/03/2015 22:10 |  | 03/03/2015 22:30 | 20 | Error en cálculo aplicado |
|  | Code | 03/03/2015 22:30 |  | 03/03/2015 22:36 | 6 | Solución error ajuste |
|  | Test | 03/03/2015 22:36 |  | 03/03/2015 22:40 | 7 |  |

**PSP Defect Recording Log**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project** | **Date** | **Number** | **Type** | **Inject** | **Remove** | **Fix Time** | **Fix Ref.** |
| Psp2.1 | 02-03-15 | 1 | 100 | DESIGN | TEST DESIGN | 5 |  |

Description

* Salida : the scopes of all variables and parameters are self-evident or defined

.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project** | **Date** | **Number** | **Type** | **Inject** | **Remove** | **Fix Time** | **Fix Ref.** |
| Psp2.1 | 02-03-15 | 1 | 80 | code | TEST | 6 |  |

Description

* Salida : java.lang.NumberFormatException: For input string: "0,20"

**Design Review Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |
| --- | --- |
| Purpose | To guide you in conducting an effective design review |
| General | * Review the entire program for each checklist category; do not attempt to review for more than one category at a time! * As you complete each review step, check off that item in the box at the right. * Complete the checklist for one program or program unit before reviewing the next. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Complete | Verify that the design covers all of the applicable requirements.   * All specified outputs are produced. * All needed inputs are furnished. * All required includes are stated. | X |  |  |  |
| Logic | Use a trace table, mathematical proof, or similar method to verify the logic.   * Verify that program sequencing is proper.   Stacks, lists, and so on are in the proper order.  Recursion unwinds properly.   * Verify that all loops are properly initiated, incremented, and terminated. * Examine each conditional statement and verify all cases. | X |  |  |  |
| Special Cases | * Check all special cases. * Ensure proper operation with empty, full, minimum, maximum, negative, and zero values for all variables. * Protect against out-of-limits, overflow, and underflow conditions. * Ensure “impossible” conditions are absolutely impossible. * Handle all possible incorrect or error conditions. | X |  |  |  |
| Functional Use | * Verify that all functions, procedures, or methods are fully understood and properly used. * Verify that all externally referenced abstractions are precisely defined. | X |  |  |  |
| Names | Verify that   * all special names are clear, defined, and authenticated * the scopes of all variables and parameters are self-evident or defined * all named items are used within their declared scopes | \_ |  |  |  |
| Standards | Ensure that the design conforms to all applicable design standards. | X |  |  |  |

**Code Review Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |
| --- | --- |
| Purpose | To guide you in conducting an effective code review |
| General | * Review the entire program for each checklist category; do not attempt to review for more than one category at a time! * As you complete each review step, check off that item in the box at the right. * Complete the checklist for one program or program unit before reviewing the next. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Complete | Verify that the code covers all of the design. | X |  |  |  |
| Includes | Verify that the includes are complete. | X |  |  |  |
| Initialization | Check variable and parameter initialization.   * at program initiation * at start of every loop * at class/function/procedure entry | X |  |  |  |
| Calls | Check function call formats.   * pointers * parameters * use of ‘&’ | X |  |  |  |
| Names | Check name spelling and use.   * Is it consistent? * Is it within the declared scope? * Do all structures and classes use ‘.’ reference? | X |  |  |  |
| Strings | Check that all strings are   * identified by pointers * terminated by NULL | X |  |  |  |
| Pointers | Check that all   * pointers are initialized NULL * pointers are deleted only after new * new pointers are always deleted after use | X |  |  |  |
| Output Format | Check the output format.   * Line stepping is proper. * Spacing is proper. | X |  |  |  |
| () Pairs | Ensure that () are proper and matched. | X |  |  |  |
| Logic Operators | * Verify the proper use of ==, =, ||, and so on. * Check every logic function for (). | X |  |  |  |
| Line-by-line check | Check every line of code for   * instruction syntax * proper punctuation | X |  |  |  |
| Standards | Ensure that the code conforms to the coding standards. | X |  |  |  |
| File Open and Close | Verify that all files are   * properly declared * opened * closed | X |  |  |  |

|  |  |
| --- | --- |
| Java Coding Standard | |
| Propósito | Estandarizar el esquema de codificación en los programas escritos en JAVA |
| Encabezado de los programas | El encabezado de las clases principales debe contener:  Número de programa  Nombre de autor  Fecha en la que se inicia la implementación del programa  Descripción del programa |
| Formato de encabezado | /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  /\* Asignación de programa: Número de programa  /\* Nombre: Nombre de autor  /\* Fecha Fecha en la que se inicia la implementación del programa  /\* Descripción: Descripción del programa  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
| Lista de contenido | La lista de contenidos describe los principales aspectos que deben ser tenidos en cuenta al hacer uso de programas a implementar |
| Contenido | Instrucciones de reutilización  Instrucciones de modificación  Declaración de atributos  Declaración de métodos |
| Instrucciones de reutilización | * **Formato de declaración:** * Las declaraciones deben hacerse por línea, no se aceptan varias declaraciones en una línea. * La declaración de variables debe hacerse siempre al inicio del método. * La declaración del método debe hacerse en una línea * Luego de la palabra clave que describa un ciclo siempre debe existir un espacio. * La llave que da inicio al método debe encontrarse en el mismo renglón de la declaración del método. * La sentencia if siempre debe llevar la llave que inicie el método y la llave de cierre. * Para separar los métodos se utilizará una línea en blanco * Para separar variables locales y la primera sentencia de un método se utilizará una línea. |
| Ejemplos de Instrucciones de reutilización | * **Declaraciones lineas separadas:** * String ejemplo; * String aplicacion; * String arreglo[]; * **Declaraciones inicio método:** * public String getSize(){ * int size =0; * } * **Declaración de método:** * public String getSize(){ * **Espacio en palabras clave:** * for ( * **Ubicación llave inicio:** * public String getSize(){ * **Sentencia if:** * if (size > 0) { * **Separación método:** * public String getSize(){ * **}** * public String getDimension(){ * **}** * **Separación variable local:** * public String getSize(){ * int size=0; * System.Out.Println("size" + size); * **}** |
| Identificadores | Los identificadores deben de cierta manera describir la propiedad del atributo. |
| Ejemplo identificador | String nombreIdentificador; /\* Declaración correcta  String nI ; /\* Declaración incorrecta |
| Comentarios | * Los comentarios deben ser claros y concisos * Debe evitarse comentarios redundantes * Los comentarios no deben contar con una cantidad excesiva de caracteres |
| Buen comentario | If(nombreIdentificador.equals("correcto")) /\* Es el nombre de identificador aplicado correctamente? \*/ |
| Mal commentario | If(nombreIdentificador.equals("correcto")) /\* valida en estado del identificador |
| Secciones proncipales | Las principales secciones del programa deben estar precedidas por la línea de descripción de la sección. |
| Ejemplo | /\*\*  \* Ejecuta el conteo de líneas de una clase de acuerdo a estandar definido  \*  \* @param archivo Archivo donde ejecutará el conteo de líneas  \* @param url Ubicación del archivo  \*/ |
| Uso de mayúsculas y Minúsculas | * Todas las constantes deben definirse con maayúsculas y si cuentan con varias palabras deben separarse con guión al piso. * Los nombres de atributos siempre contendrán minúsculas y para varias palabras se usará una letra mayúscula. |
| Ejemplo de uso de mayúsculas y minúsulas | * private static final String PALABRA\_CLAVE\_CLASS = "class"; * private int cantidadDirectorios; |

**Size Counting Standard Template**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |  |
| --- | --- | --- |
| **Count Type** | **Type** | **Comments** |
| Physical/Logical | Physical |  |
| **Statement Type** | **Included** | **Comments** |
| Executable | SI |  |
| Nonexecutable: |  |  |
| Declarations | SI Nota 3 y 4 |  |
| Imports | SI, Nota 4 |  |
| Comments | NO | (\*) Los asteríscos nos son contados |
| Blank lines | NO |  |
| Other elements |  |  |
| Anotaciones | SI |  |
|  |  |  |
| **Aclaraciones** |  | **Ejemplos** |
| Empty statements | SI | if (condición){}, ; , {} |
| Begin...end | Nota 1 |  |
| Expression evaluation | SI |  |
| End symbols | SI Nota 2 | Para finalizar las sentencias ejecutables y declaraciones |
| Then, else, otherwise | Note 1 |  |
| Elseif | SI |  |
| Keywords | SI |  |
| Labels | SI |  |
| Note 1 |  | Cuenta una vez cada ocurrencia de las siguientes palabras clave junto a un espacio en blanco a la derecha: CASE , DO, ELSE , ENUM , FOR, IF, private, public , STRUCT , SWITCH, UNION, WHILE |
| Note 2 |  | Cuenta una vez cada ocurrencia de: ; , {} ó }; |
| Note 3 |  | Cuenta cada variable o declaración de parámetro. |
| Note 4 |  | Cuenta la línea de package y cada import. |

Functional Specification Template

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| --- | --- | --- | --- | --- | --- | --- |
| Student | | | Angela Edith Suárez Torres | | Date | 01/03/2015 |
| Program | | | Psp2.1 | | Program # | 6 |
| Instructor | | | Luis Daniel Benavides Navarro | | Language | Java |
|  | | | | | | |
| **Class Name** | | * edu.uniandes.ecos.controlador.App | | | | |
| **Parent Class** | | [java.lang.Object](http://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) | | | | |
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|  | | | | | | |
| **Attributes** | | | | | | |
|  | **Declaration** | | | **Description** | | |
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|  | | | | | | |
| **Items** | | | | | | |
|  | **Declaration** | | | **Description** | | |
|  | public static void main([String](http://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)[] args) | | | Método principal para la ejecución del programa. Solicita por consola los datos iniciales para el cálculo a aplicar. | | |

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| --- | --- | --- | --- | --- |
| **Class Name** | | * edu.uniandes.ecos.controlador.IntegracionControlador | | |
| **Parent Class** | | * javax.servlet.http.HttpServlet | | |
|  | | * javax.servlet.GenericServlet | | |
|  | | [java.lang.Object](http://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) | | |
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| **Attributes** | | | | |
|  | **Declaration** | | | **Description** |
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| **Items** | | | | |
|  | **Declaration** | | **Description** | |
|  | [doGet](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\controlador\IntegracionControlador.html#doGet(javax.servlet.http.HttpServletRequest,%20javax.servlet.http.HttpServletResponse))(javax.servlet.http.HttpServletRequest req, javax.servlet.http.HttpServletResponse resp) | | Heredado de javax.servlet.http.HttpServlet, es el método ejecutado cuando el servlet recibe una petición de tipo GET. | |
|  | [doPost](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\controlador\IntegracionControlador.html#doPost(javax.servlet.http.HttpServletRequest,%20javax.servlet.http.HttpServletResponse))(javax.servlet.http.HttpServletRequest req, javax.servlet.http.HttpServletResponse resp | | Heredado de javax.servlet.http.HttpServlet, es el método ejecutado cuando el servlet recibe una petición de tipo POST. | |
|  | [main](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\controlador\IntegracionControlador.html#main(java.lang.String[]))([String](http://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)[] args) | | Método que arranca servidor de prueba- | |

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| --- | --- | --- | --- | --- |
| **Class Name** | | * edu.uniandes.ecos.mundo.Calculo | | |
| **Parent Class** | | [java.lang.Object](http://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) | | |
| **Attributes** | | | | |
|  | **Declaration** | | | **Description** |
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| **Items** | | | | |
|  | **Declaration** | | **Description** | |
|  | [**calcularGamma**](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Calculo.html#calcularGamma(double))(double valor) | | Calcula gamma de un valor entero | |
|  | [**calcularGammaFraccion**](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Calculo.html#calcularGammaFraccion(double))(double valor) | | Calcula gamma de una fracción | |
|  | [**calcularSerie**](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Calculo.html#calcularSerie(double,%20double,%20int,%20double))(double x, double dof, int multiplicador, double ancho) | | Aplica la ecuación para el cálculo de la integración numérica | |
|  | [**cargarIntegracionNumerica**](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Calculo.html#cargarIntegracionNumerica(edu.uniandes.ecos.mundo.Integracion))(**[Integracion](file:///D:\\Monitoria\\psp2.1\\psp2.1\\target\\site\\apidocs\\edu\\uniandes\\ecos\\mundo\\Integracion.html" \o "class in edu.uniandes.ecos.mundo)** integracion) | | Método que retorna el valor de x resultante del aplicar ajuste sobre distribución p en la integración numérica | |
|  | [**getX**](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Calculo.html#getX(double,%20boolean))(double xActual, boolean add) | | Retorna x según x axtual | |
|  | [**validarCalculoGamma**](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Calculo.html#validarCalculoGamma(double))(double valor) | | Valida si el cálculo de Gamma debe aplicarse a un entero o a una fracción | |

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| --- | --- | --- | --- |
| **Class Name** | | * edu.uniandes.ecos.mundo.Integracion | |
| **Parent Class** | | [java.lang.Object](http://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) | |
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| **Attributes** | | | |
|  | **Declaration** | | **Description** |
|  | private int numSeg | | Número de segmentos |
|  | private double valX | | Valor inicial que toma x sin ajuste |
|  | private double dof | | Grados de libertad |
|  | private double p | | Valor para la integración numérica |
|  | | | |
| **Items** | | | |
|  | **Declaration** | | **Description** |
|  | [getDof](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#getDof())() | | Método por el cual se obtiene el valor para dof |
|  | [getNumSeg](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#getNumSeg())() | | Método por el cual se obtiene el valor para el número de segmentos |
|  | [getP](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#getP())() | | Método por el cual se obtiene el valor para p |
|  | [getValX](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#getValX())() | | Método a partir del cual se obtiene el valor para x |
|  | [setDof](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#setDof(double))(double dof) | | Método a partir del cual se envía el valor para dof |
|  | [setNumSeg](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#setNumSeg(int))(int numSeg) | | Método a partir del cual se envía el valor para el número de segmentos |
|  | [setP](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#setP(double))(double p) | | Método a partir del cual se envía el valor para p |
|  | [setValX](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\mundo\Integracion.html#setValX(double))(double valX) | | Método a partir del cual se envía el valor para x |

|  |  |  |  |
| --- | --- | --- | --- |
| **Class Name** | | * edu.uniandes.ecos.presentacion.PaintingText | |
| **Parent Class** | | [java.lang.Object](http://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) | |
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| **Attributes** | | | |
|  | **Declaration** | | **Description** |
|  |  | |  |
|  | | | |
| **Items** | | | |
|  | **Declaration** | | **Description** |
|  | public void colorearResultado(double p) | | Colorea el resultado por consola \* |

|  |  |  |  |
| --- | --- | --- | --- |
| **Class Name** | | * edu.uniandes.ecos.presentacion.PaintingWeb | |
| **Parent Class** | | [java.lang.Object](http://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) | |
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|  | | | |
| **Attributes** | | | |
|  | **Declaration** | | **Description** |
|  |  | |  |
|  | | | |
| **Items** | | | |
|  | **Declaration** | | **Description** |
|  | [presentarOpcion](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\presentacion\PaintingWeb.html#presentarOpcion(javax.servlet.http.HttpServletRequest,%20javax.servlet.http.HttpServletResponse))(javax.servlet.http.HttpServletRequest req, javax.servlet.http.HttpServletResponse resp) | | Presenta al usuario los campos para ingresar el valor de p, número de segmentos y el valor dof, o grados de libertad |
|  | [showResults](file:///D:\Monitoria\psp2.1\psp2.1\target\site\apidocs\edu\uniandes\ecos\presentacion\PaintingWeb.html#showResults(javax.servlet.http.HttpServletRequest,%20javax.servlet.http.HttpServletResponse,%20java.lang.Double))(javax.servlet.http.HttpServletRequest req, javax.servlet.http.HttpServletResponse resp, [Double](http://docs.oracle.com/javase/7/docs/api/java/lang/Double.html?is-external=true" \o "class or interface in java.lang) valor) | | Presenta por pantalla el resltado del x ajustado |

Operational Specification Template

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Angela Edith Suárez Torres | Date | 01/03/2015 |
| Program | Psp2.1 | Program # | 6 |
| Instructor | Luis Daniel Benavides Navarro | Language | Java |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario Number** |  | **User Objective** |  | |
| **Scenario Objective** | |  | | |
| **Source** | **Step** | **Action** | | **Comments** |
| Sistema | 1 | Solicita los valores para p, dof y num seg | |  |
| user | 2 | Ingresa los valores para p, dof y num seg | |  |
| Sistema | 3 | Calcula el valor para X y lo presenta en pantalla | |  |

Test Report Template

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  | | |  | |
|  | | | | | |
| Student | | | Angela Edith Suárez Torres | | Date | 01/03/2015 | | | |
| Program | | | Psp2.1 | | Program # | 6 | | | |
| Instructor | | | Luis Daniel Benavides Navarro | | Language | Java | | | |
|  | | | | | | | | | |

|  |  |
| --- | --- |
| Test Name/Number | 1 |
|  |  |
|  |  |
| Test Description | Calcular el valor que toma ***X,*** para el cual integra la función t desde cero a x, tomando como resultados obtenidos de p |
|  |  |
|  |  |
|  |  |
|  | El usuario ingresa los valores: |
| Test Conditions | Número de segmentos = 10 |
|  | Valor para p=0,20 |
|  | Valor de dof=6 |
|  |  |
|  |  |
| Expected Results | El valor de x = 0.55338 |
|  |  |
|  |  |
|  |  |
| Actual Results | El valor de x =0.5543124999970801 |
|  |  |

|  |  |
| --- | --- |
| Test Name/Number | 2 |
|  |  |
|  |  |
| Test Description | Calcular el valor que toma ***X,*** para el cual integra la función t desde cero a x, tomando como resultados obtenidos de p |
|  |  |
|  |  |
|  |  |
|  | El usuario ingresa los valores: |
| Test Conditions | Número de segmentos = 10 |
|  | Valor para p=0,45 |
|  | Valor de dof=15 |
|  |  |
|  |  |
| Expected Results | El valor de x = 1.75305 |
|  |  |
|  |  |
|  |  |
| Actual Results | El valor x es : 1.753054999971491 |
|  |  |

|  |  |
| --- | --- |
| Test Name/Number | 3 |
|  |  |
|  |  |
| Test Description | Calcular el valor que toma ***X,*** para el cual integra la función t desde cero a x, tomando como resultados obtenidos de p |
|  |  |
|  |  |
|  |  |
|  | El usuario ingresa los valores: |
| Test Conditions | Número de segmentos = 10 |
|  | Valor para p=0.495 |
|  | Valor de dof=4 |
|  |  |
|  |  |
| Expected Results | El valor de x = 4.60409 |
|  |  |
|  |  |
|  |  |
| Actual Results | El valor x es : 4.608199999863402 |
|  |  |