*Functional Specification Template*

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| **Student** | | Sergio Diaz | | | **Program #** | 4 |
|  | | | | | | | |
| **Class Name** | | | Simpson | | | | |
| **Parent Class** | | |  | | | | |
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| **Attributes** | | | | | | | |
|  | **Declaration** | | | **Description** | | | |
|  | Num\_seg = 10 | | | (any even number) | | | |
|  | dof | | | Second user input Degrees of freedom | | | |
|  | x | | | First user input | | | |
|  | dw | | | x/num\_seg | | | |
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| **Items** | | | | | | | |
|  | **Declaration** | | | **Description** | | | |
|  | Simpson (double dX, int iDof, int iNumberOfSegments) | | | Constructor | | | |
|  | getP() | | | Gets final output | | | |
|  | Get3 | | |  | | | |
|  | Get4 | | |  | | | |
|  | calulaF() | | | where  • *dof* = degrees of freedom  • Γ is the gamma function | | | |
|  | calculaMultiplier | | | 1 en las orillas y 2 y 4 en medio de manera alternada | | | |
|  | calculaTerms | | |  | | | |
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| **Class Name** | | DistT | |
| **Parent Class** | |  | |
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| **Attributes** | | | |
|  | **Declaration** | | **Description** |
|  | xi | | W |
|  | dof | | Second user input Degrees of freedom |
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| **Items** | | | |
|  | **Declaration** | | **Description** |
|  | DistT | | Constructor |
|  | calculaGama | | Gets gamma |
|  | Get3 | |  |
|  | Get4 | |  |
|  | calulaF | | where  • *dof* = degrees of freedom  • Γ is the gamma function |
|  | calculaMultiplier | | 1 en las orillas y 2 y 4 en medio de manera alternada |
|  | calculaTerms | |  |
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| **Class Name** | | Programa4 | |
| **Parent Class** | |  | |
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| **Attributes** | | | |
|  | **Declaration** | | **Description** |
|  | Br | |  |
|  | x | | X (user input) |
|  | Dof | | Degrees of freedom |
|  | Eps | | .0001 error |
|  | Num\_seg | | Even number |
|  | absSubstraction | | Absolute value to check against epsilon |
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| **Items** | | | |
|  | **Declaration** | | **Description** |
|  | checksX | | Checks for a valid X |
|  | checksDof | | Checks for a valid DOF |
|  | getP | | Calculates P |
|  | printResults() | | Prints results |
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