*Logic Specification Template*

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| **Student** | Iker Arbulu Lozano | **Program #** | 5 |

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| **Class Name** | Programa1 |

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| **Design** | Todos los OST |
| **References** |  |
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| **Method Name** | Main |

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| **Parameters** | Args[]:String |
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| Abrir el buffer de lectura para el usuario |
| Crear la variable de tipo CalculadorX |
| Crear la variable de tipo double para la dP |
| Crear la variable de tipo int para los iDof |
| Desplegar (“Dame la P”) |
| If(Pattern.matches(“\\d+(\\.\\d+)?”,currentLine) |
| If(Double.parseDouble(currentLine)>0 && Double.parseDouble(currentLine)<0.5) |
| Asignar la entrada del usuario a la dP |
| Else |
| Desplegar(“P incorrecta”) |
| System.exit(0) |
| Else |
| Desplegar(“P incorrecta”) |
| System.exit(0) |
| Desplegar (“Dame los DOF”) |
| If(Pattern.matches(“[\\d+](file:///\\d+)”,currentLine) |
| If(Int.parseInt(currentLine)>0) |
| Asignar la entrada del usuario a los DOF |
| Else |
| Desplegar(“DOF incorrectos”) |
| System.exit(0) |
| Else |
| Desplegar(“DOF incorrectos”) |
| System.exit(0) |
| Crea calculadorX(dP,iDof) |
| calculadorX.print() |
| Cerrar el buffer de lectura para el usuario |

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| **Class Name** | CalculadorX |

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| **Design** | OST 1 |
| **References** |  |
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| **Method Name** | CalculadorX |

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| **Parameters** | dP: double |
|  | iDof: int |
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| this.dP = dP |
| this.iDof = iDof |
| dD = 1 |
| calculaX() |

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| **Class Name** | CalculadorX |

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| **Design** | OST 1 |
| **References** |  |
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| **Method Name** | CalculaX |

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| **Parameters** |  |
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| dX1 = 0 |
| Bool sumando = true |
| ceCalcE = new CalculadorE(dX1, iDof) |
| dP1 = ceCalce.getP() |
| dX2 = dX1 + dD |
| ceCalcE.setX(dX2) |
| dP2 = ceCalce.getP() |
| While(abs(dX1-dX2) > dE) |
| dX1 = dX2 |
| if((dP2 > dP && sumando)or (dP2 < dP && !sumando)) |
| dD = dD/-2 |
| sumando = !sumando |
| dX2 = dX1 + dD |
| ceCalcE.setX(dX2) |
| dP2 = ceCalce.getP() |
| End while |
| dX = dX2 |

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| **Class Name** | CalculadorX |

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| **Design** | OST 1 |
| **References** |  |
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| **Method Name** | Print |

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| **Parameters** |  |
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| System.out.println(“p = ”+ String.*format*("%.5f", dP)) |
| System.out.println(“dof = ”+ iDof) |
| Sytem.out.println(“x = ”+ String.format(“%.5f”, dX)) |