CSD 1133 – 2023S

Student ID: 901142
Student Name: Roshan Shrestha
Assignment # 7

Pseudocode:

```
Module Main()
    // Declare local variable to store total work hour, hourly pay rate and calculated gross pay
    Declare Real workHours
    Declare Real hourPayRate
    Declare Real calculatedGrossPay

    // Calculate and get pay per hour
    Set hourPayRate = getPayRate()

    // Calculate and get total work hours
    Set workHours = getWorkHours()

    // Calculate and store gross pay
    Set calculatedGrossPay = workHours * hourPayRate

    // Display grosspay output to user
    Display "Your gross pay is: $" + calculatedGrossPay

End Module

Function Real getPayRate()
    // Declare local variable to store user input for hourly pay rate and its validation status
    Declare Real inputPayRate
    Declare Boolean isPayRateInValid

    // Ask user their pay rate per hour
    Display "Please enter your hourly pay rate: $"
    Input inputPayRate

    // Check and validate if pay rate is between 7.50 to 18.25
    Set isPayRateInValid = isInValid(inputPayRate, 7.50, 18.25)

    While isPayRateInValid
        Display "Invalid hourly pay rate. Please enter a inputValue between $7.50 and $18.25: "
        Display "Please enter your hourly pay rate: $"
        Input inputPayRate
        Set isPayRateInValid = isInValid(inputPayRate, 7.50, 18.25)
```

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    End While

    Return inputPayRate
End Function

Function Real getWorkHours()
    // Declare local variable to store user input for work hours and its validation status
    Declare Real inputWorkHours
    Declare Boolean isWorkHoursInValid

    // Ask user input for total hours worked
    Display "Please enter your total work hours: "
    Input inputWorkHours

    // Check and validate if hours worked is between 0 to 40
    Set isWorkHoursInValid = isInValid(inputWorkHours, 9, 40)

    While isWorkHoursInValid
        Display "Invalid hours worked. Work hours must be between 0 to 40 !"
        Display "Please enter your total work hours: "
        Input inputWorkHours
        Set isWorkHoursInValid = isInValid(inputWorkHours, 9, 40)
    End While

    Return inputWorkHours
End Function

// Validate the condition with passed inputValue and return true if the inputValue is valid and
false otherwise
Function Boolean isInValid(inputValue, minValue, maxValue)
    Declare Boolean validStatus
    If inputValue < minValue OR inputValue > maxValue Then
        Set validStatus = True
    Else
        Set validStatus = False
    End If
    Return validStatus
End Function
```

Flow Chart:

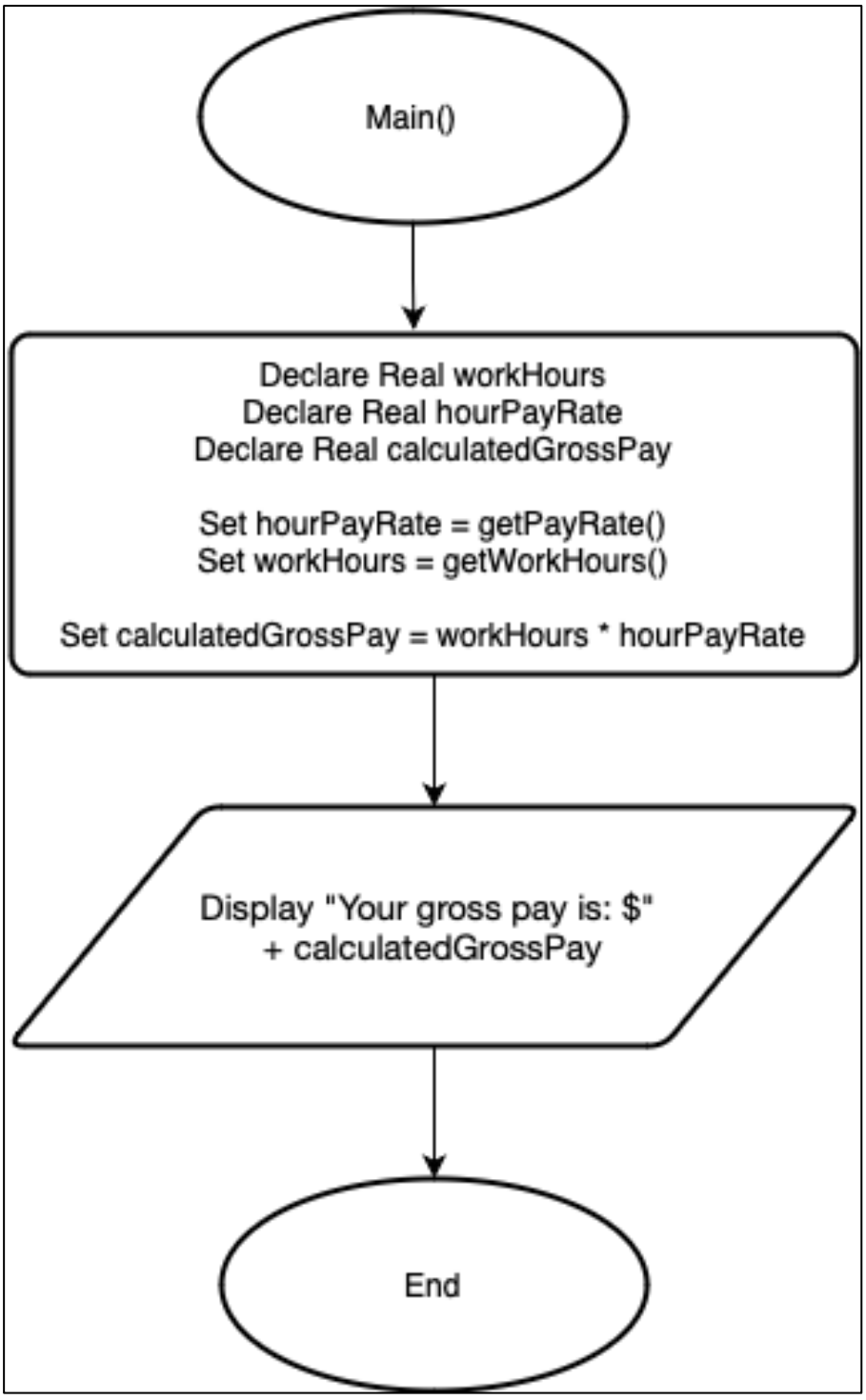

Figure 1: Main Module

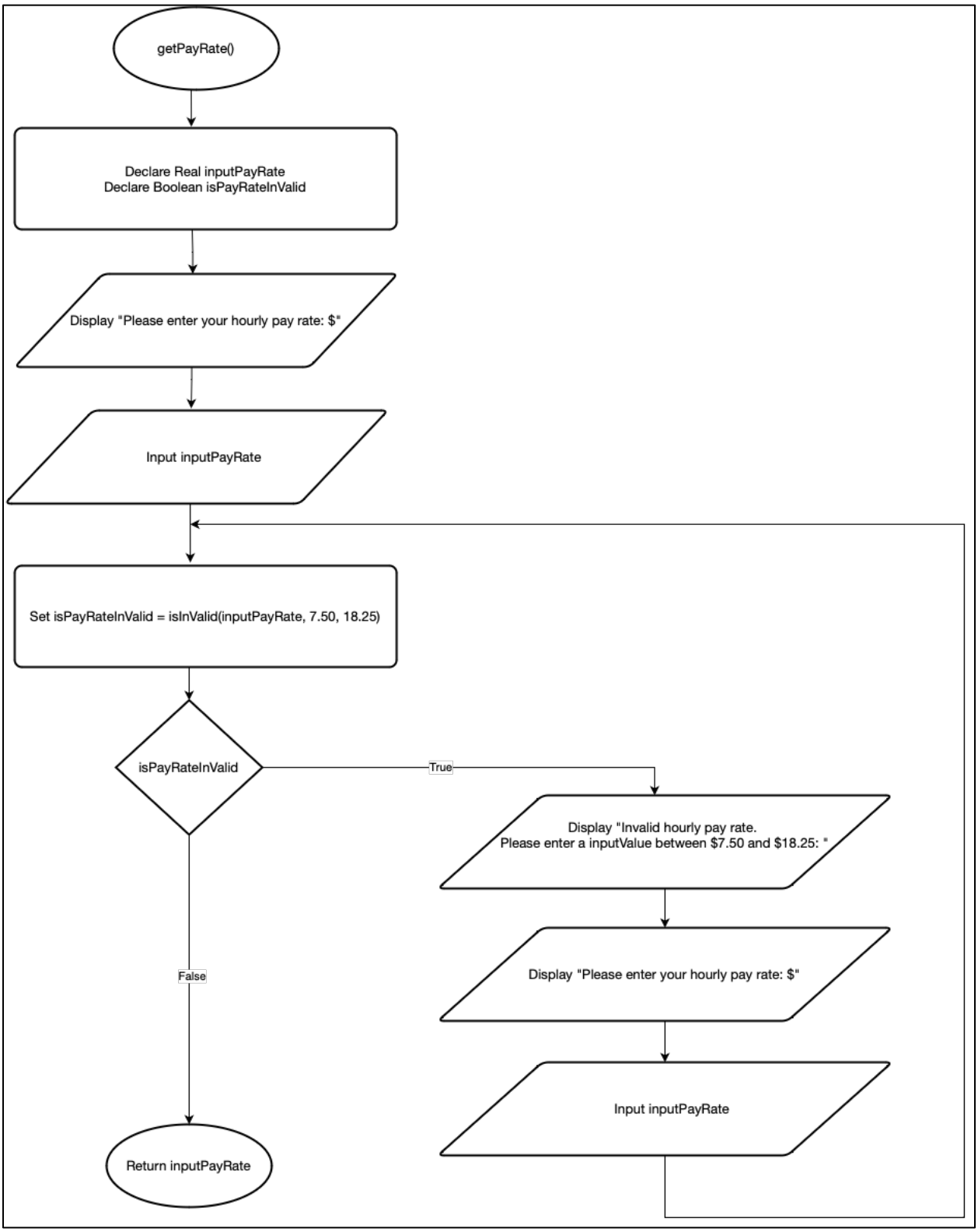

Figure 2: Function to get hourly pay.

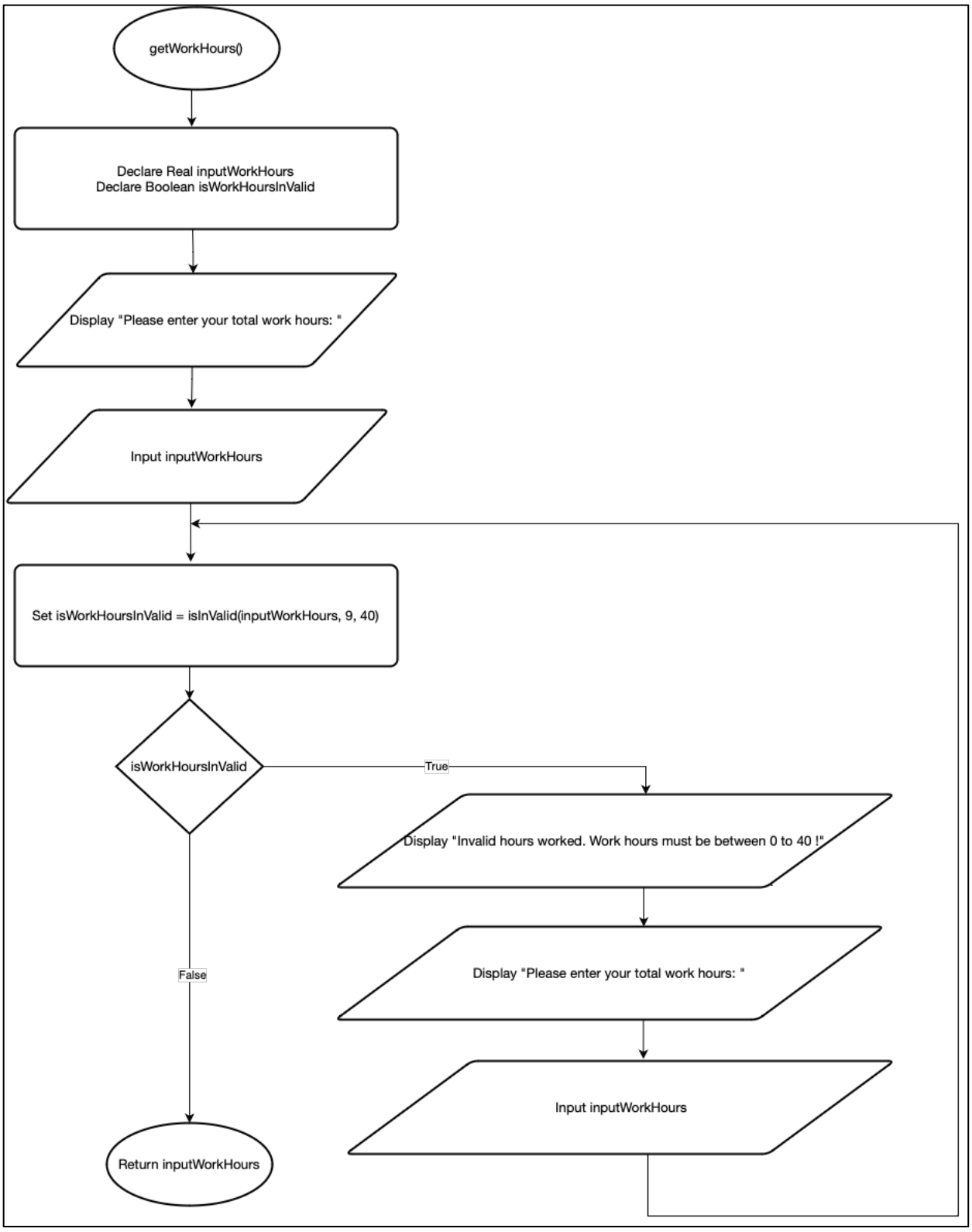

Figure 3: Function to get total worked hours.

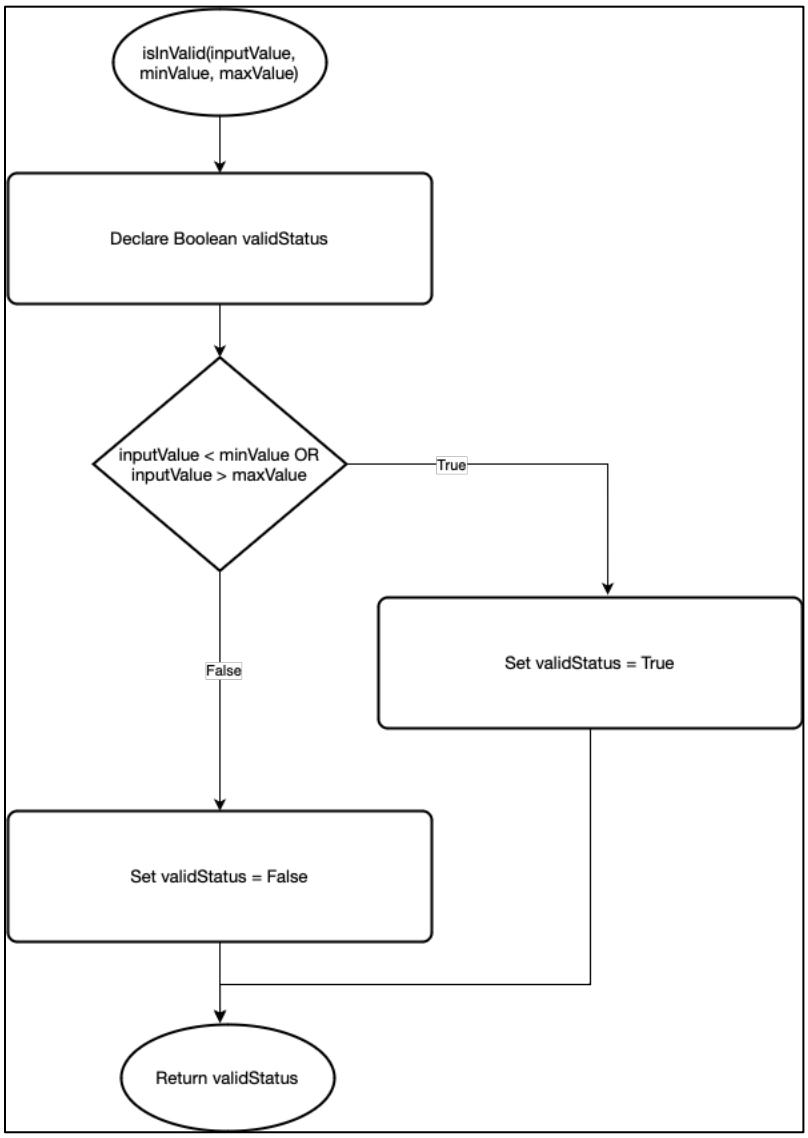

Figure 4: Function to validate the input.