Answer
Assignment No. 1

Pseudocode & flowchart:

1-

- Pseudocode :

Number 1 - Pseudocode .txt - Notepad

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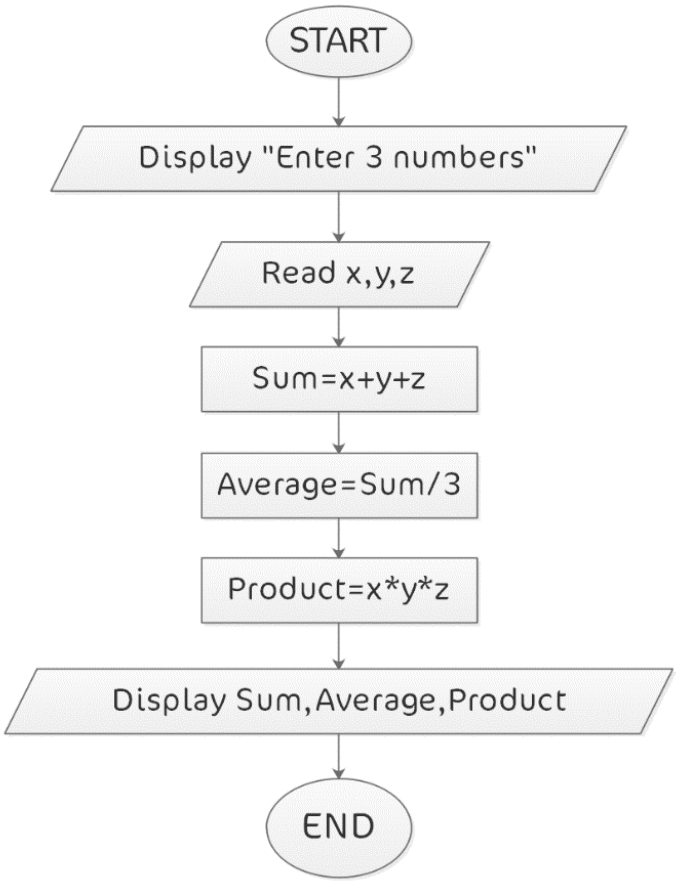
```
Start
    Display "Enter 3 Numbers"
    Read a  variable values x and y and z
        Sumed x and y and z  in the Sum variable
        Divide Variable Sum  by 3 in the Average variable
        Multiply x*y*z in the Product variable
            Display a Sum and an Average and a Product variables
End
```

- Flowchart :



2-

- Pseudocode :

Number 2 - Pseuducode .txt - Notepad

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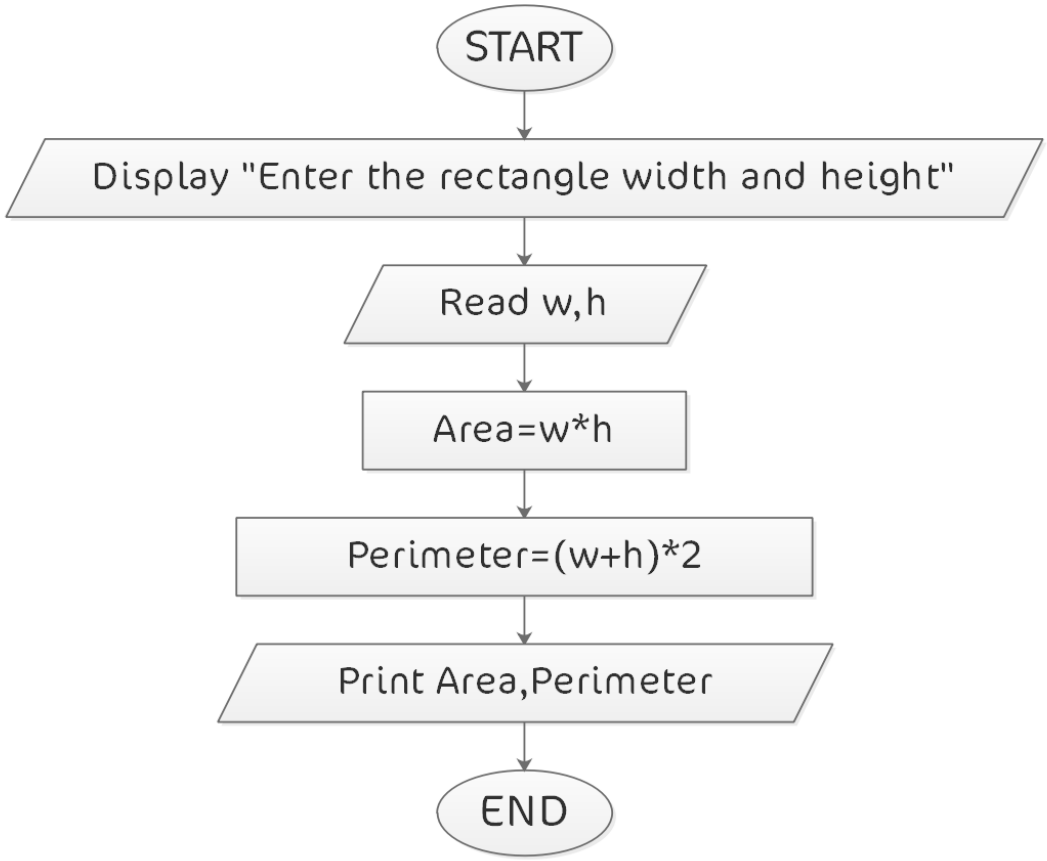
```
Start
    Display "Enter the rectangle width and height "
    Read a variable values w and h
        Multiply w*h in the Area variable
        Multiply  w plus h in 2  in the Perimeter variable
            Print an Area and a Perimeter variables
End
```

- Flowchart :



3-

- Pseudocode :

Number 3 - Pseuducode .txt - Notepad

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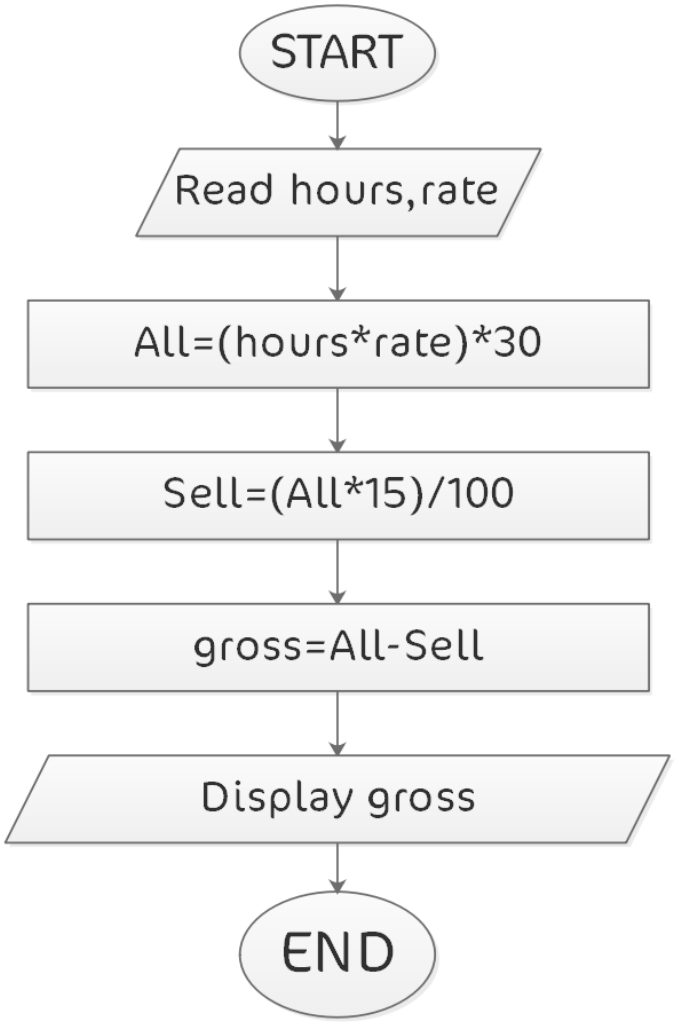
```
Start
    Read a variable values hours and rate
        Multiply hours*rate all in 30 in the All variable
        Multiply All variable * 15 all division on 100 in the Sell variable
        difference Sell variable from all variable in the gross variable
            Display gross variable
End
```

- Flowchart :



4-

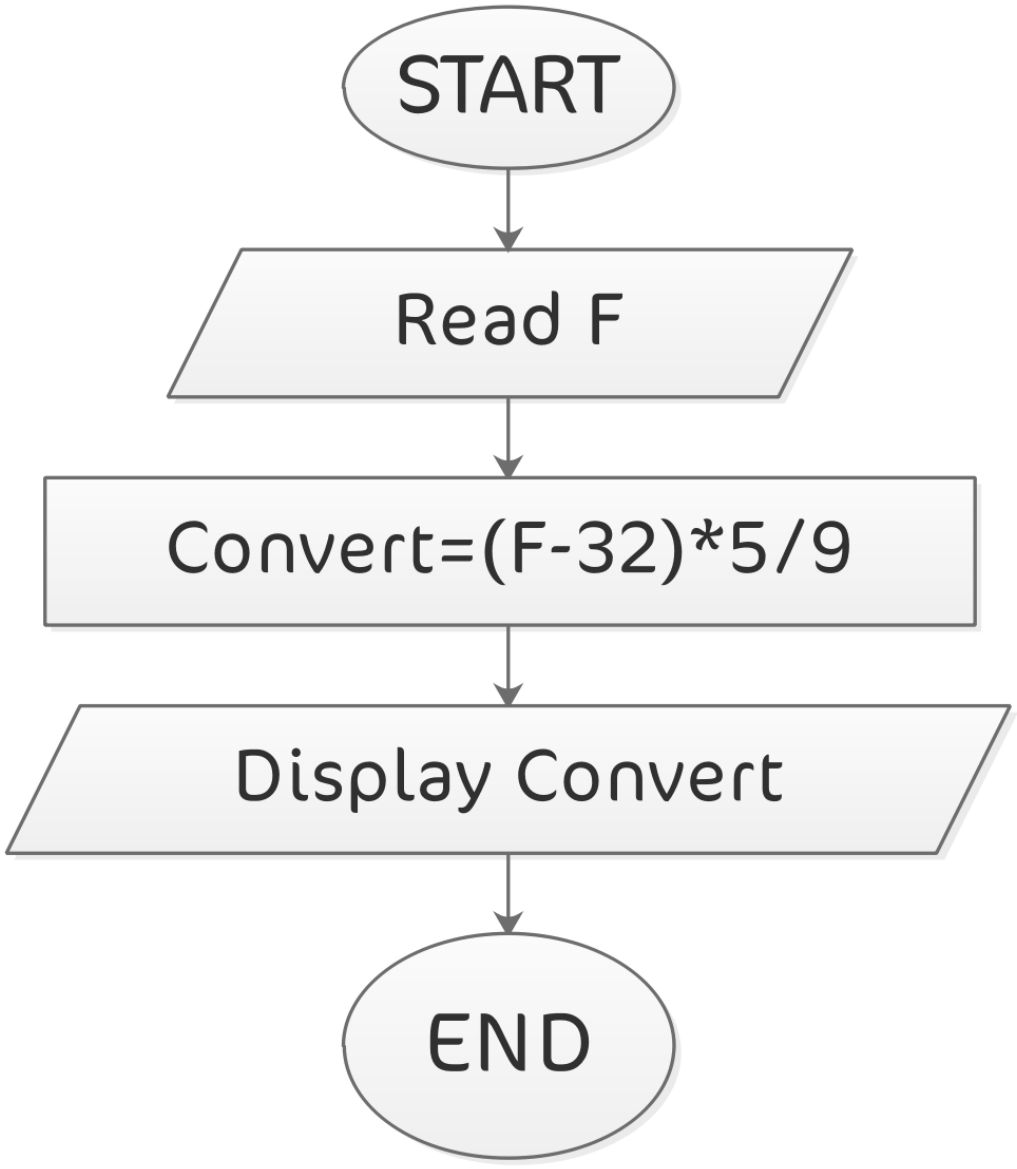
- Pseudocode :

Number 4 - Pseuducode .txt - Notepad

File Edit Format View Help

```
Start
    Read a variable value F
        difference 32 from F variable All multiplied by 5/9 in the Convert variable
            Display Convert variable
End
```

- Flowchart :



Numbering systems

1. **Convert decimal to binary:**

   1. $(12)_{10} \longrightarrow (1100)_2$
   2. $(20)_{10} \longrightarrow (00010100)_2$
   3. $(28)_{10} \longrightarrow (00011100)_2$
   4. $(64)_{10} \longrightarrow (01000000)_2$
   5. $(102)_{10} \longrightarrow (01100110)_2$

2. **Convert binary to decimal:**

   1. $(00011010)_2 \longrightarrow (26)_{10}$
   2. $(01010101)_2 \longrightarrow (85)_{10}$
   3. $(01001111)_2 \longrightarrow (79)_{10}$
   4. $(01100000)_2 \longrightarrow (96)_{10}$
   5. $(01111111)_2 \longrightarrow (127)_{10}$

3. Perform the following ADD operations with detailed steps:

   1. $(00000011)_2 + (00000001)_2 = (00000100)_2$
   2. $(00011001)_2 + (00101101)_2 = (01000110)_2$
   3. $(00011111)_2 + (00011111)_2 = (00111110)_2$
   4. $(00001111)_2 + (00001110)_2 = (00011101)_2$
   5. $(00010111)_2 + (00110101)_2 = (01001100)_2$

4. Perform the following OR operations with detailed steps:

   1. $(00000011)_2 \mid (00000001)_2 \longrightarrow (00000011)_2$
   2. $(00011001)_2 \mid (00101101)_2 \longrightarrow (00111101)_2$
   3. $(00011111)_2 \mid (00011111)_2 \longrightarrow (00011111)_2$
   4. $(00001111)_2 \mid (00001110)_2 \longrightarrow (00001111)_2$
   5. $(00010111)_2 \mid (00110101)_2 \longrightarrow (00110111)_2$

5. Perform the following AND operations with detailed steps:

1. $(00000011)_2$ & $(00000001)_2 \longrightarrow (00000001)_2$
2. $(00011001)_2$ & $(00101101)_2 \longrightarrow (00001001)_2$
3. $(00011111)_2$ & $(00011111)_2 \longrightarrow (00011111)_2$
4. $(00001111)_2$ & $(00001110)_2 \longrightarrow (00001110)_2$
5. $(00010111)_2$ & $(00110101)_2 \longrightarrow (00010101)_2$

6. Perform the following XOR operations with detailed steps:

1. $(00000011)_2$ & $(00000001)_2 \longrightarrow (00000010)_2$
2. $(00011001)_2$ & $(00101101)_2 \longrightarrow (00110100)_2$
3. $(00011111)_2$ & $(00011111)_2 \longrightarrow (00000000)_2$
4. $(00001111)_2$ & $(00001110)_2 \longrightarrow (00000001)_2$
5. $(00010111)_2$ & $(00110101)_2 \longrightarrow (00100010)_2$

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