CSA5734-FUNDAMENATLS OF COMPUTING WITH OPERATING SYSTEM
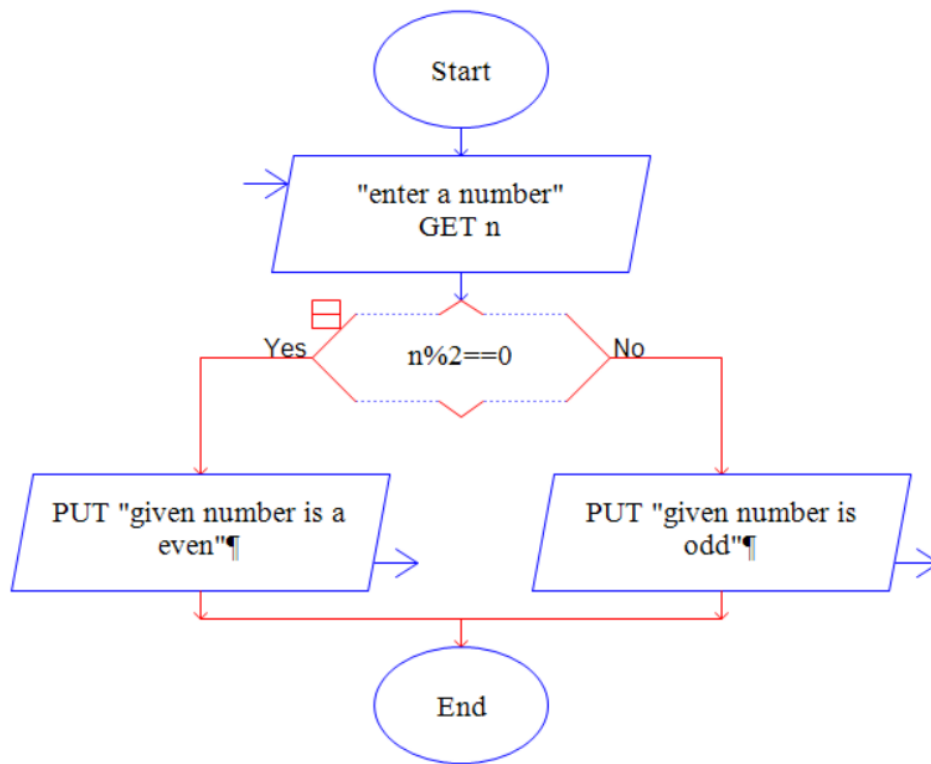
T.INDU PRIYA

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1.Finding whether the given integer is odd or even.
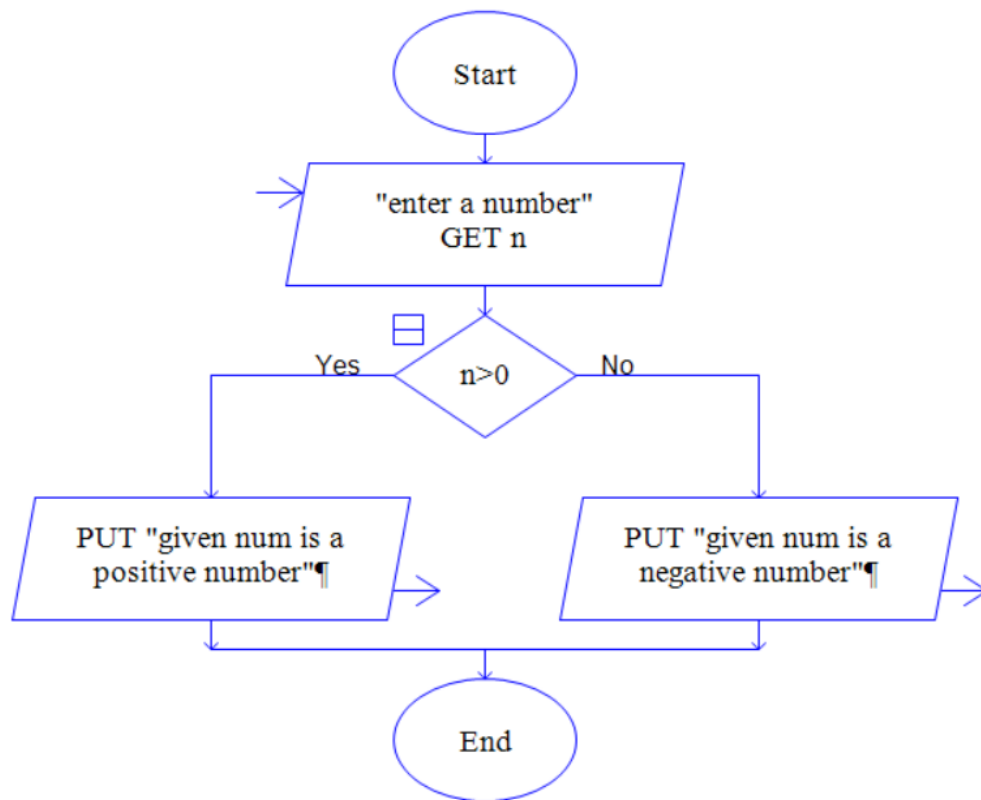
RAPTOR FLOWCHART:

CSA5734-FUNDAMENATLS OF COMPUTING WITH OPERATING SYSTEM

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2.Finding the given integer is positive or negative.
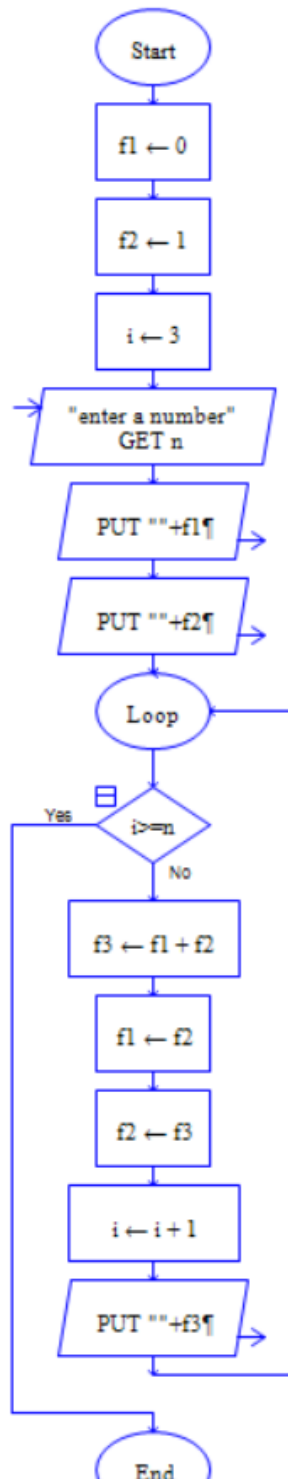
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T.INDU PRIYA
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3.Generation of Fibonacci series 0, 1, 1, 2, 3, 5, 8, …..n.

RAPTOR FLOWCHART:

```
                    ┌─────────┐
                    │  Start  │
                    └─────────┘
                         │
                    ┌─────────┐
                    │ f1 ← 0  │
                    └─────────┘
                         │
                    ┌─────────┐
                    │ f2 ← 1  │
                    └─────────┘
                         │
                    ┌─────────┐
                    │  i ← 3  │
                    └─────────┘
                         │
                 /"enter a number"/
                 /    GET n       /
                         │
                 / PUT ""+f1¶ /
                         │
                 / PUT ""+f2¶ /
                         │
                    ┌─────────┐
                    │  Loop   │
                    └─────────┘
                         │
            Yes    ◇ i>=n ◇
             ┌──────     │ No
             │      ┌───────────┐
             │      │ f3 ← f1+f2│
             │      └───────────┘
             │            │
             │      ┌───────────┐
             │      │  f1 ← f2  │
             │      └───────────┘
             │            │
             │      ┌───────────┐
             │      │  f2 ← f3  │
             │      └───────────┘
             │            │
             │      ┌───────────┐
             │      │ i ← i+1   │
             │      └───────────┘
             │            │
             │      / PUT ""+f3¶ /
             │            │
             └────────────┤
                    ┌─────────┐
                    │   End   │
                    └─────────┘
```
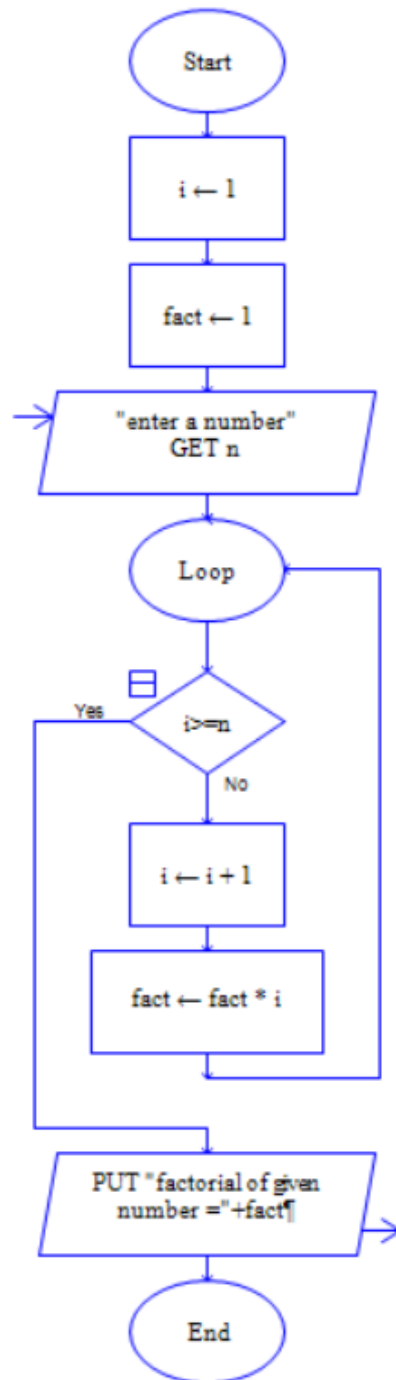
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T.INDU PRIYA

192110486

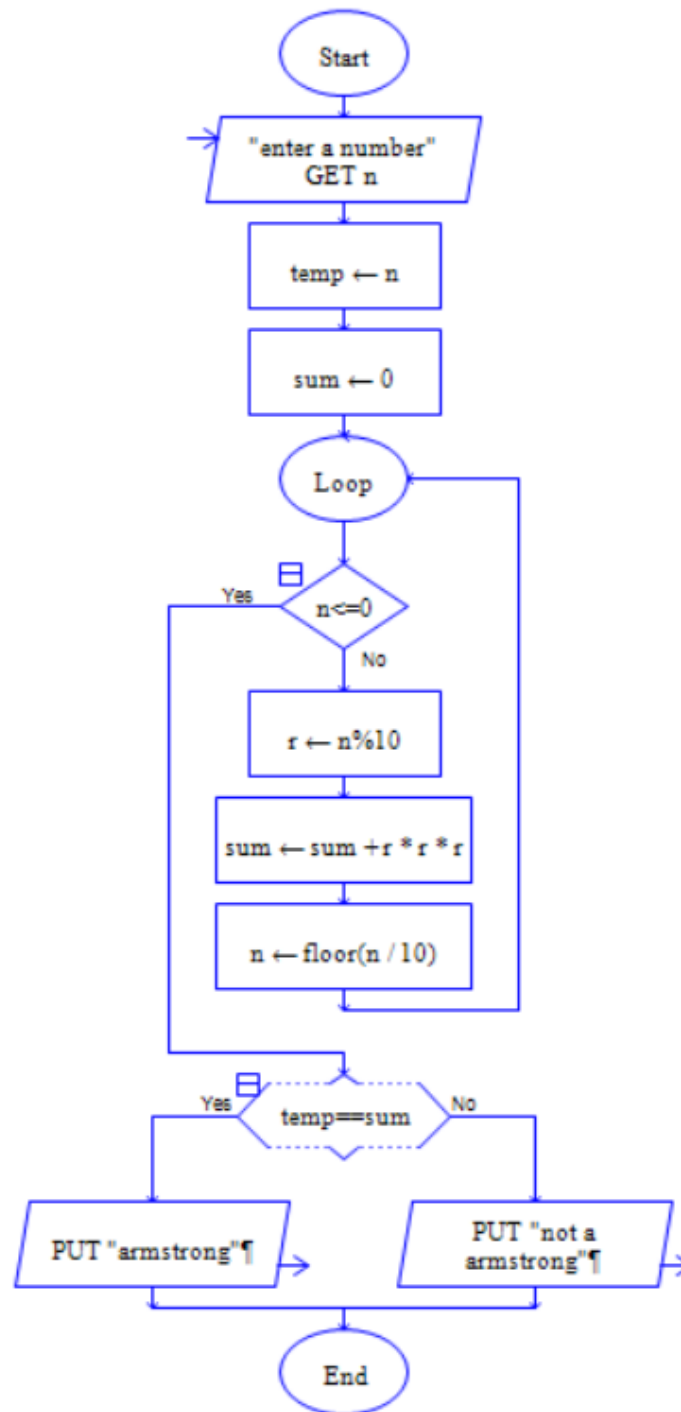4.Product series (Factorial of a given number) .

RAPTOR FLOWCHART:

```
                    Start
                      |
                   i ← 1
                      |
                  fact ← 1
                      |
              "enter a number"
                  GET n
                      |
                    Loop  ←──────────┐
                      |              │
                  ┌─ i>=n            │
            Yes   │   │ No           │
                  │   |              │
                  │ i ← i + 1        │
                  │   |              │
                  │ fact ← fact * i ─┘
                  │
         PUT "factorial of given
            number ="+fact
                  |
                  End
```

PUT "factorial of given number ="+fact

CSA5734-FUNDAMENATLS OF COMPUTING WITH OPERATING SYSTEM

T.INDU PRIYA
192110486

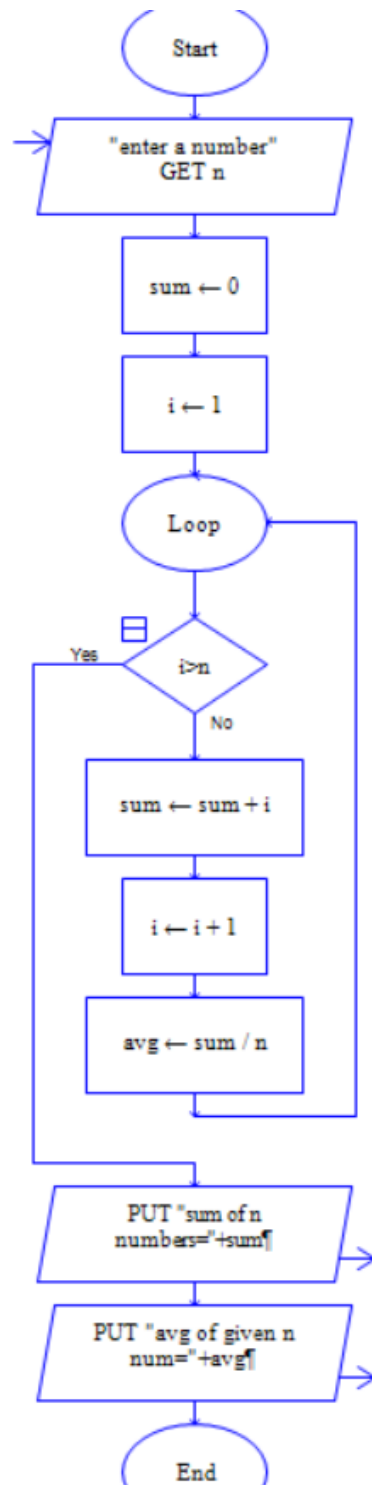5.Finding given number is Armstrong or not .

RAPTOR FLOWCHART:

```
                    ( Start )
                       |
              /"enter a number"/
              /   GET n        /
                       |
              [  temp ← n  ]
                       |
              [  sum ← 0   ]
                       |
                   ( Loop )
                       |
              Yes    < n<=0 >
           ┌─────────   |
           |          No |
           |     [  r ← n%10  ]
           |            |
           |     [ sum ← sum +r *r *r ]
           |            |
           |     [ n ← floor(n / 10) ]
           |            |
           └────────────┘
                       |
           Yes  < temp==sum >  No
         ┌──────            ──────┐
   /PUT "armstrong"¶/      /PUT "not a/
                           /armstrong"¶/
         └────────   ────────┘
                    ( End )
```

T.INDU PRIYA
192110486

6.Summing up any n numbers and finding average .

RAPTOR FLOWCHART:

```
                    ( Start )
                       |
          /"enter a number"/
          /    GET n      /
                       |
              [ sum ← 0 ]
                       |
              [ i ← 1 ]
                       |
                  ( Loop )
                       |
    Yes          < i>n >
     |            No
     |             |
     |     [ sum ← sum + i ]
     |             |
     |     [ i ← i + 1 ]
     |             |
     |     [ avg ← sum / n ]
     |             |
     |_____|
           |
    /PUT "sum of n/
    /numbers="+sum¶/
           |
    /PUT "avg of given n/
    /num="+avg¶/
           |
        ( End )
```
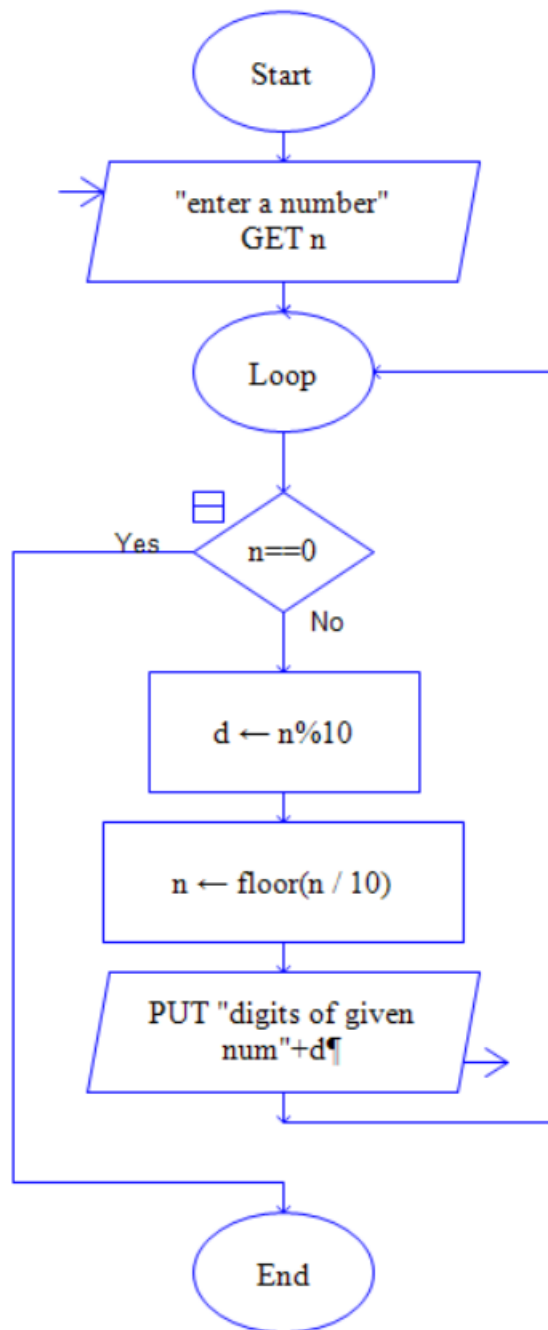
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T.INDU PRIYA
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7.Printing digits of an integer number .
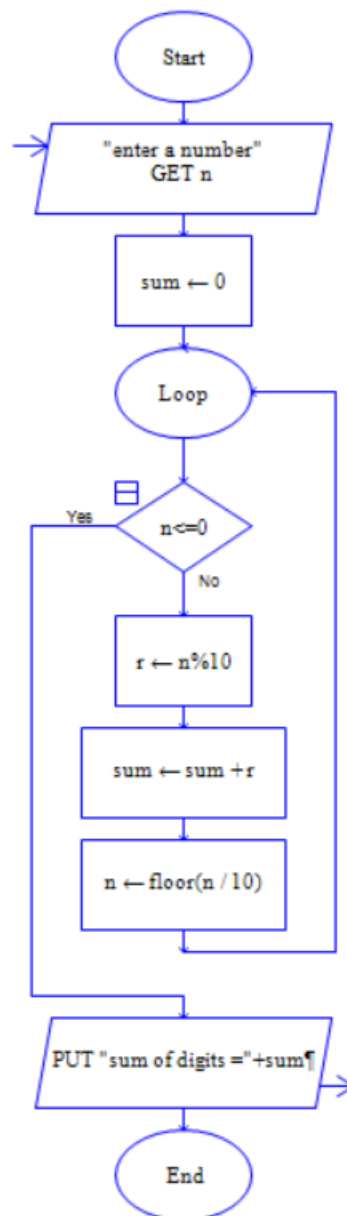
RAPTOR FLOWCHART:

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8.Summing up the digits of an integer number.
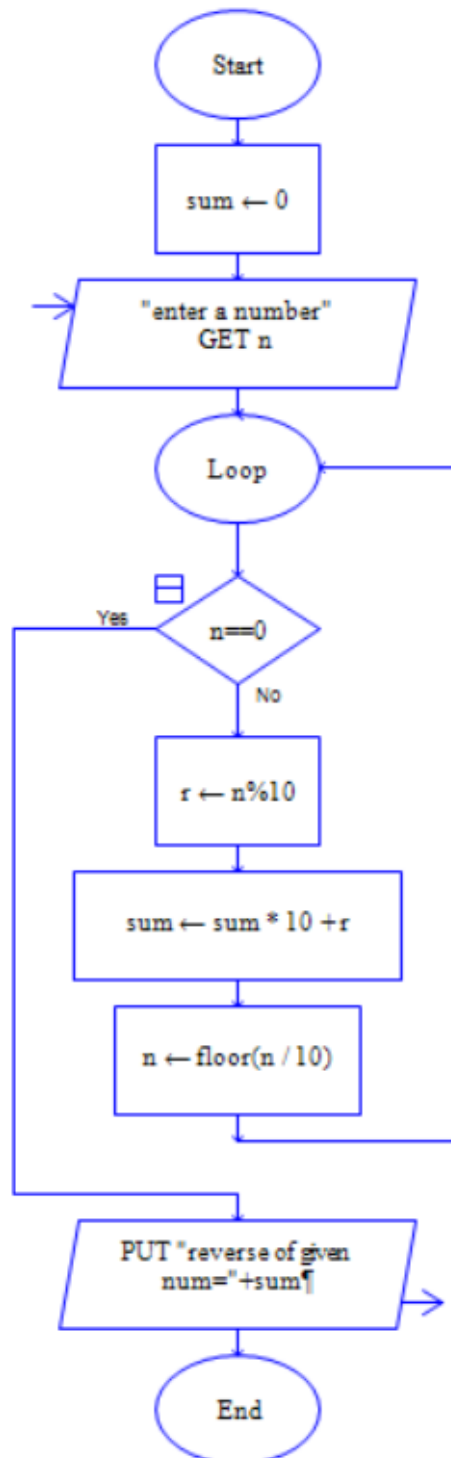
RAPTOR FLOWCHART:

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192110486

9.Reversing the digits of an integer number.

RAPTOR FLOWCHART:

```
                    ┌─────────┐
                    │  Start  │
                    └─────────┘
                         │
                    ┌─────────┐
                    │ sum ← 0 │
                    └─────────┘
                         │
              ┌────────────────────┐
              │  "enter a number"  │
              │      GET n         │
              └────────────────────┘
                         │
                    ┌─────────┐
                    │  Loop   │◄──────────┐
                    └─────────┘           │
                         │                │
                      ◇ n==0 ◇            │
            Yes ───────         No        │
             │                  │         │
             │          ┌──────────────┐  │
             │          │  r ← n%10    │  │
             │          └──────────────┘  │
             │                  │         │
             │       ┌─────────────────┐ │
             │       │ sum ← sum*10 +r │ │
             │       └─────────────────┘ │
             │                  │         │
             │      ┌──────────────────┐ │
             │      │ n ← floor(n /10) │ │
             │      └──────────────────┘ │
             │                  │         │
             │                  └─────────┘
             │
      ┌──────────────────────┐
      │ PUT "reverse of given│
      │   num="+sum          │
      └──────────────────────┘
                │
           ┌─────────┐
           │   End   │
           └─────────┘
```
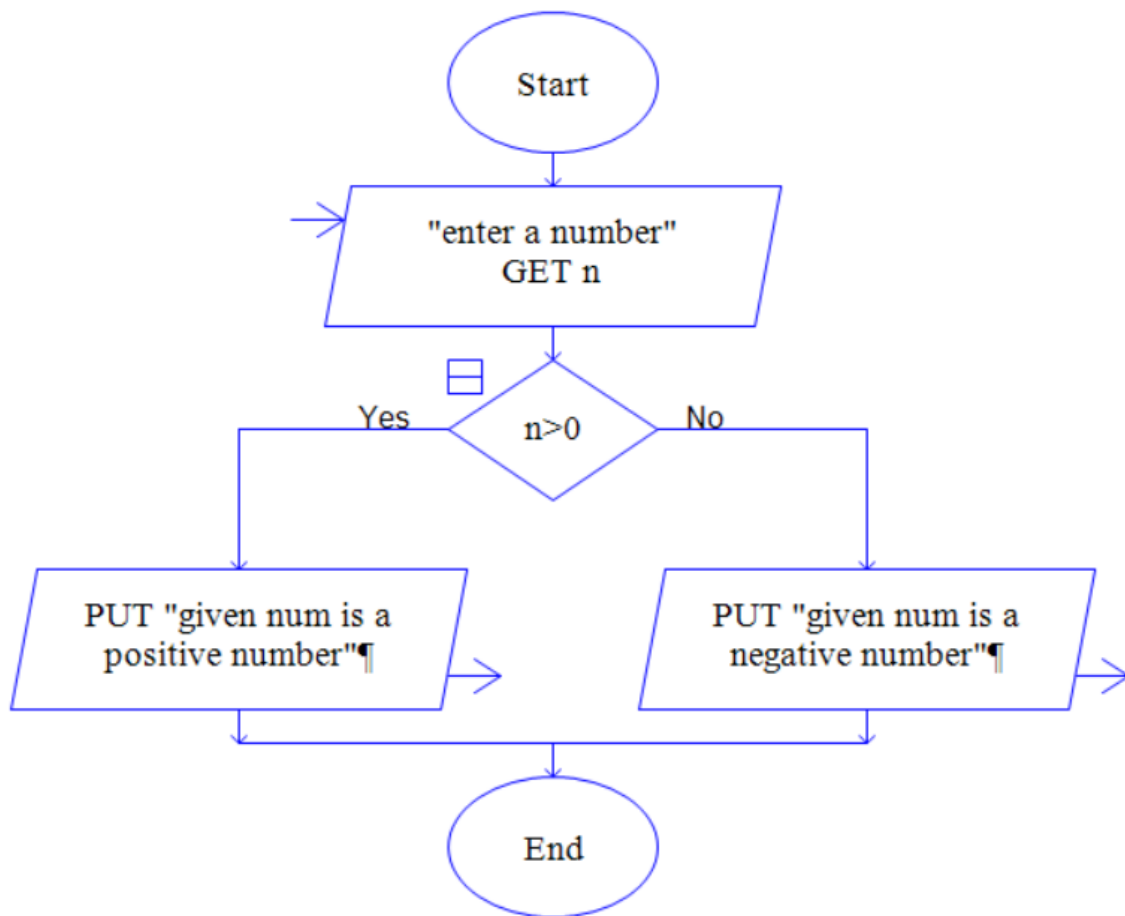
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10.Finding the given integer is positive or negative .

RAPTOR FLOWCHART:

Start

"enter a number"
GET n

n>0

Yes

No

PUT "given num is a positive number"¶

PUT "given num is a negative number"¶

End

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192110486

11.Swapping two numbers with a temporary variable.

RAPTOR FLOWCHART:

```
                    Start

            "enter a number"
                GET n1

            "enter a number"
                GET n2

              temp ← n1

               n1 ← n2

              n2 ← temp

          PUT "after swapping
              n1="+n1¶

          PUT "after swapping
              n2="+n2¶

                    End
```