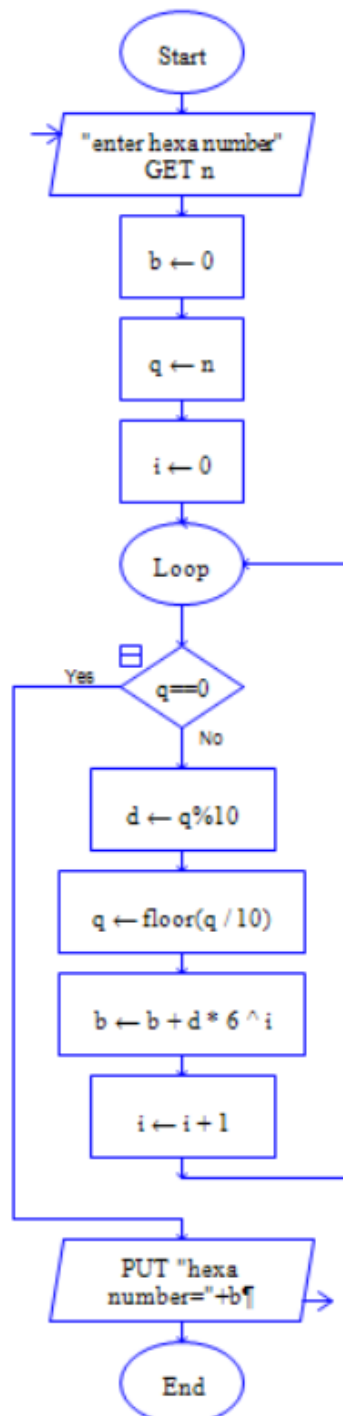# CSA5734-FUNDAMENTALS OF COMPUTING WITH OPERATING SYSTEMS

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192110486

1.C Program to convert hexa to decimal.

RAPTOR FLOWCHART:
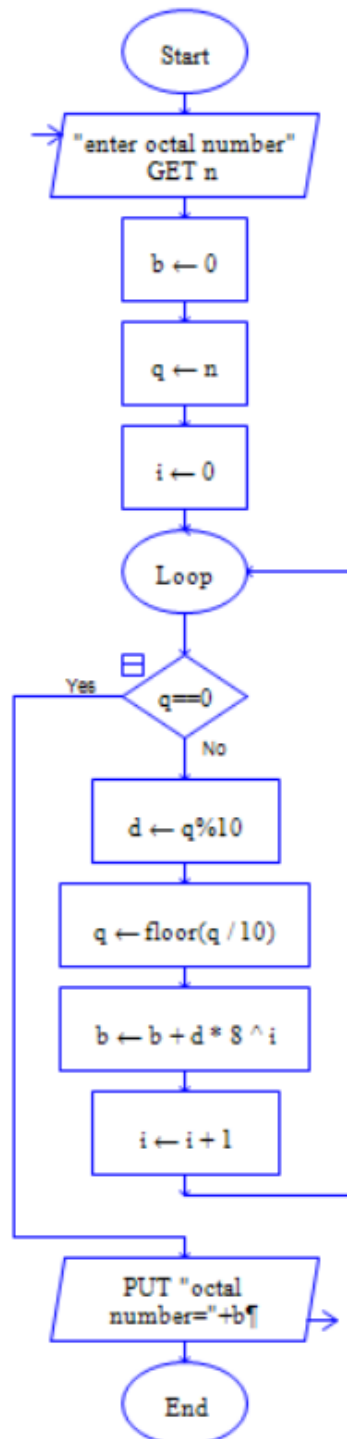
```
                    Start
                      |
         "enter hexa number"
              GET n
                      |
                   b ← 0
                      |
                   q ← n
                      |
                   i ← 0
                      |
                    Loop  ←─────────────┐
                      |                  |
          Yes    ┌─ q==0                 |
          ┌──────┘    |                  |
          |          No                  |
          |           |                  |
          |      d ← q%10                |
          |           |                  |
          |    q ← floor(q / 10)         |
          |           |                  |
          |    b ← b + d * 6 ^ i         |
          |           |                  |
          |       i ← i + 1 ─────────────┘
          |           
          └───→ PUT "hexa
                number="+b
                      |
                    End
```

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2.C Program to convert octal to decimal.

RAPTOR FLOWCHART:

```
                    Start

          "enter octal number"
                GET n

               b ← 0

               q ← n

               i ← 0

                Loop

  Yes                    No
          q==0

               d ← q%10

          q ← floor(q / 10)

          b ← b + d * 8 ^ i

               i ← i + 1

          PUT "octal
          number="+b¶

                End
```

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3.C Program to read a number and find its square.

RAPTOR FLOWCHART:

```
                    Start

            "enter a number"
                 GET n

              sq ← n * n

          PUT "the given
          number="+n¶

        PUT "square of given num=
                "+sq¶

                    End
```
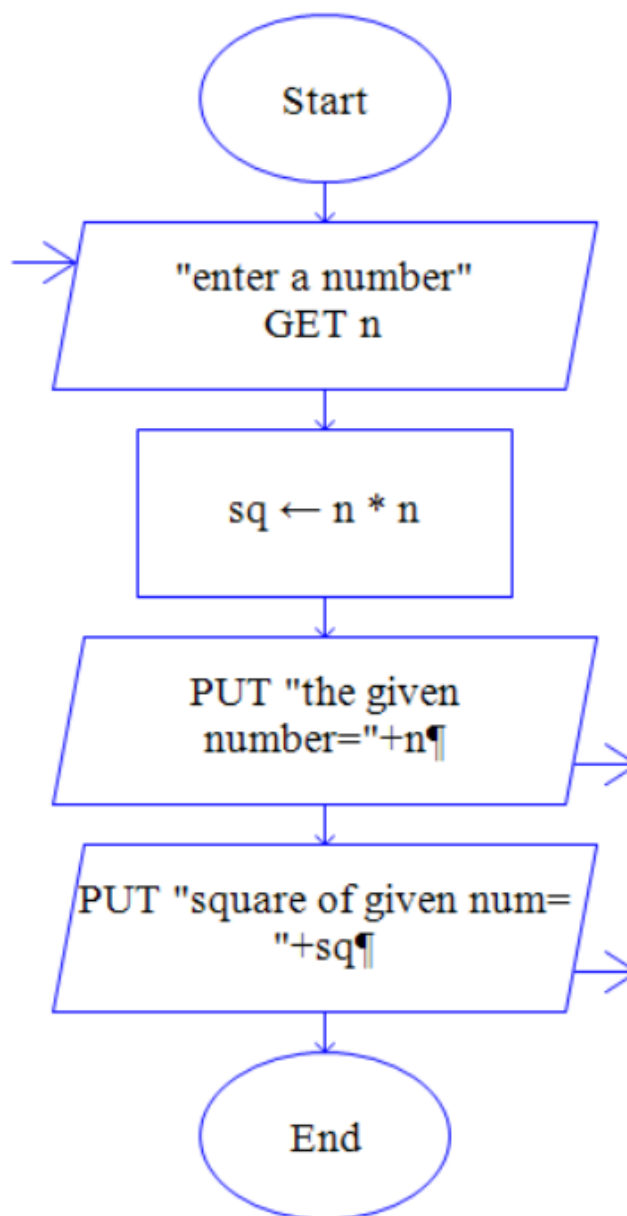
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4.C Program to find the biggest of three numbers.

RAPTOR FLOWCHART:

```
                    ( Start )
                       |
         "enter a number"
              GET a
                       |
         "enter b number"
              GET b
                       |
         "enter ac number"
              GET c
                       |
            greatest ← a
                       |
      Yes <  greatest<b  > No
       |                   |
  greatest ← b             |
       |_____|
                       |
      Yes <  greatest<c  > No
       |                   |
  greatest ← c             |
       |_____|
                       |
        PUT "greatest num
         ="+greatest¶
                       |
                    ( End )
```
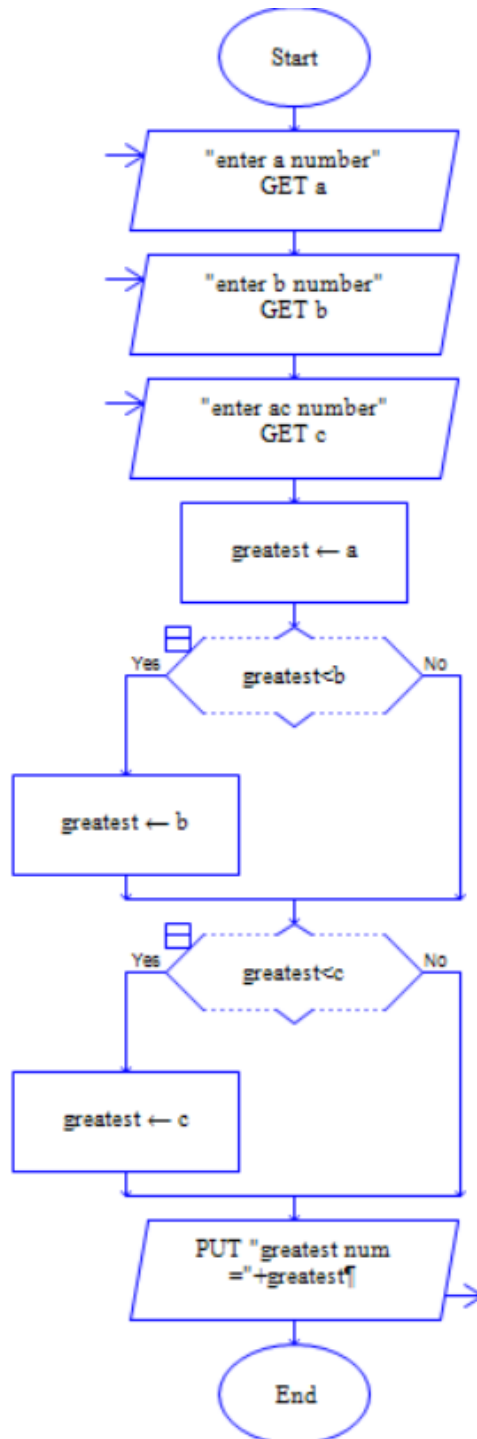
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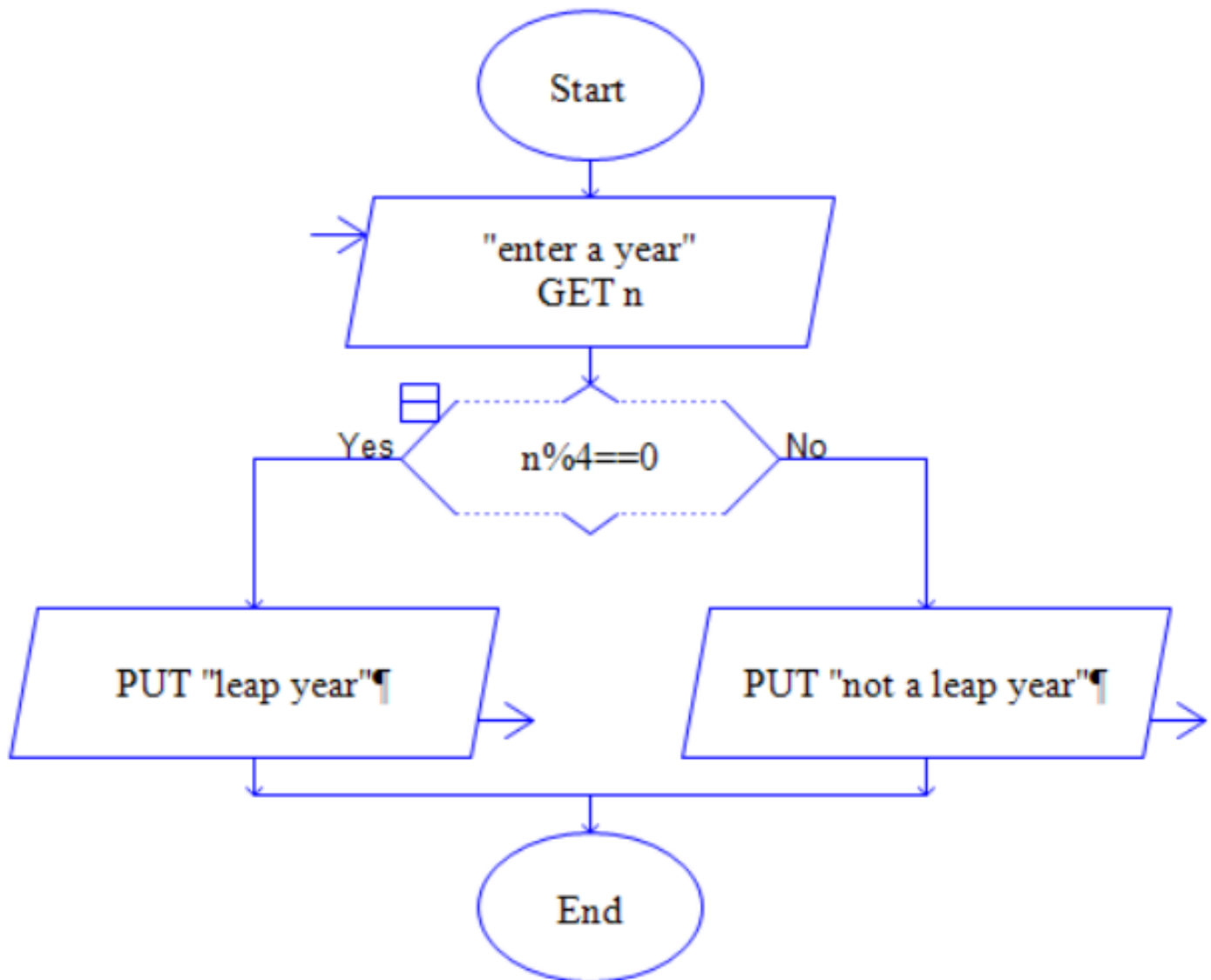
5.C Program to find leap year.

RAPTOR FLOWCHART:

```
                    ┌─────────────┐
                   (    Start     )
                    └──────┬──────┘
                           │
           ┌───────────────▼───────────────┐
          /        "enter a year"           /
         /            GET n                 /
        └───────────────┬─────────────────┘
                        │
              ┌─────────▼─────────┐
       Yes   /      n%4==0         \   No
      ┌─────<                       >─────┐
      │      \                     /      │
      │       └───────────────────┘       │
      │                                   │
 ┌────▼────────────┐          ┌──────────▼──────────────┐
/ PUT "leap year"¶ /          / PUT "not a leap year"¶  /
└────┬────────────┘          └──────────┬──────────────┘
     │                                  │
     └──────────────┬───────────────────┘
                    │
             ┌──────▼──────┐
            (     End      )
             └─────────────┘
```

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6.C Program to prepare mark list using elif statement.

RAPTOR FLOWCHART:

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7.C Program to perform arithmetic operation on two numbers.
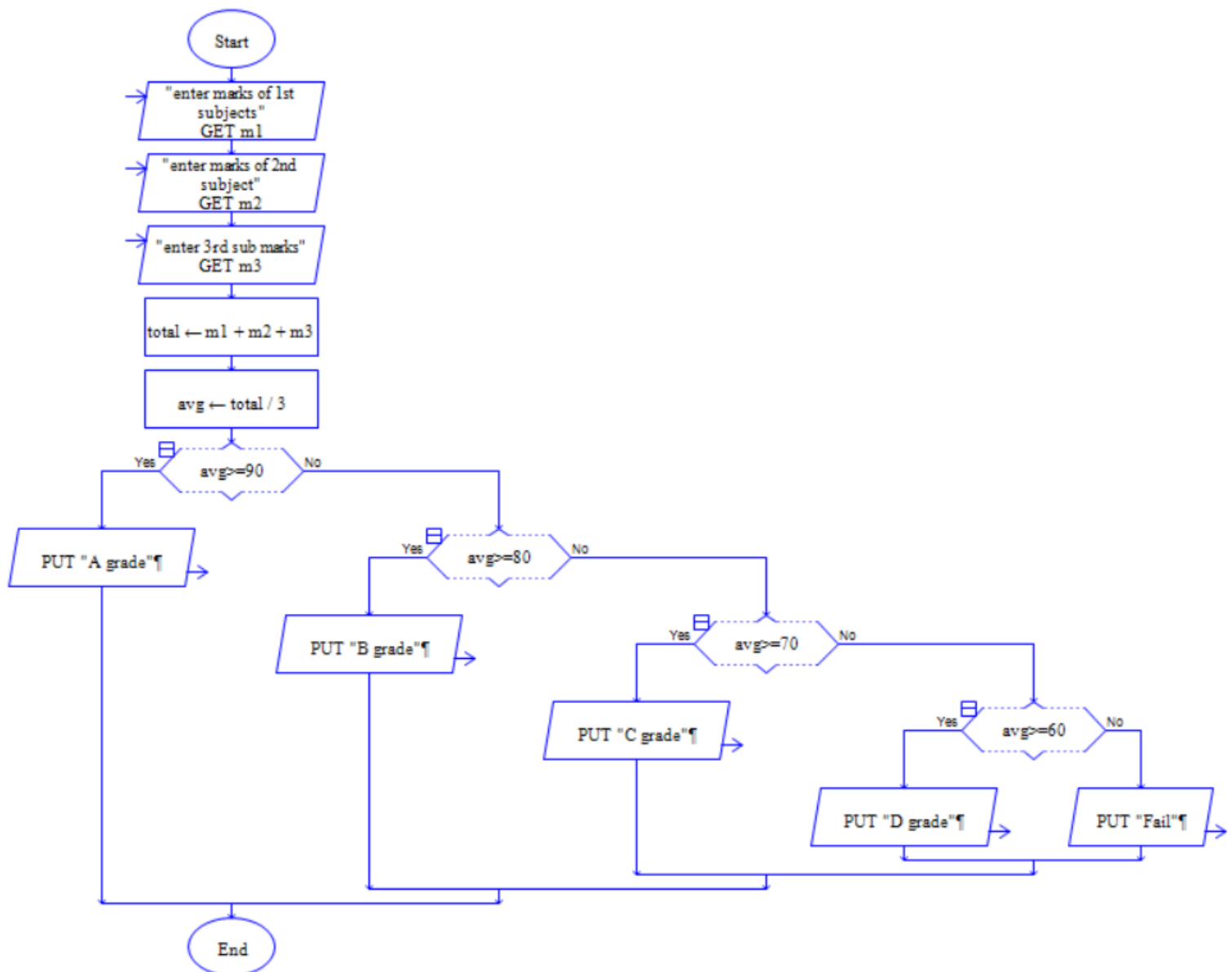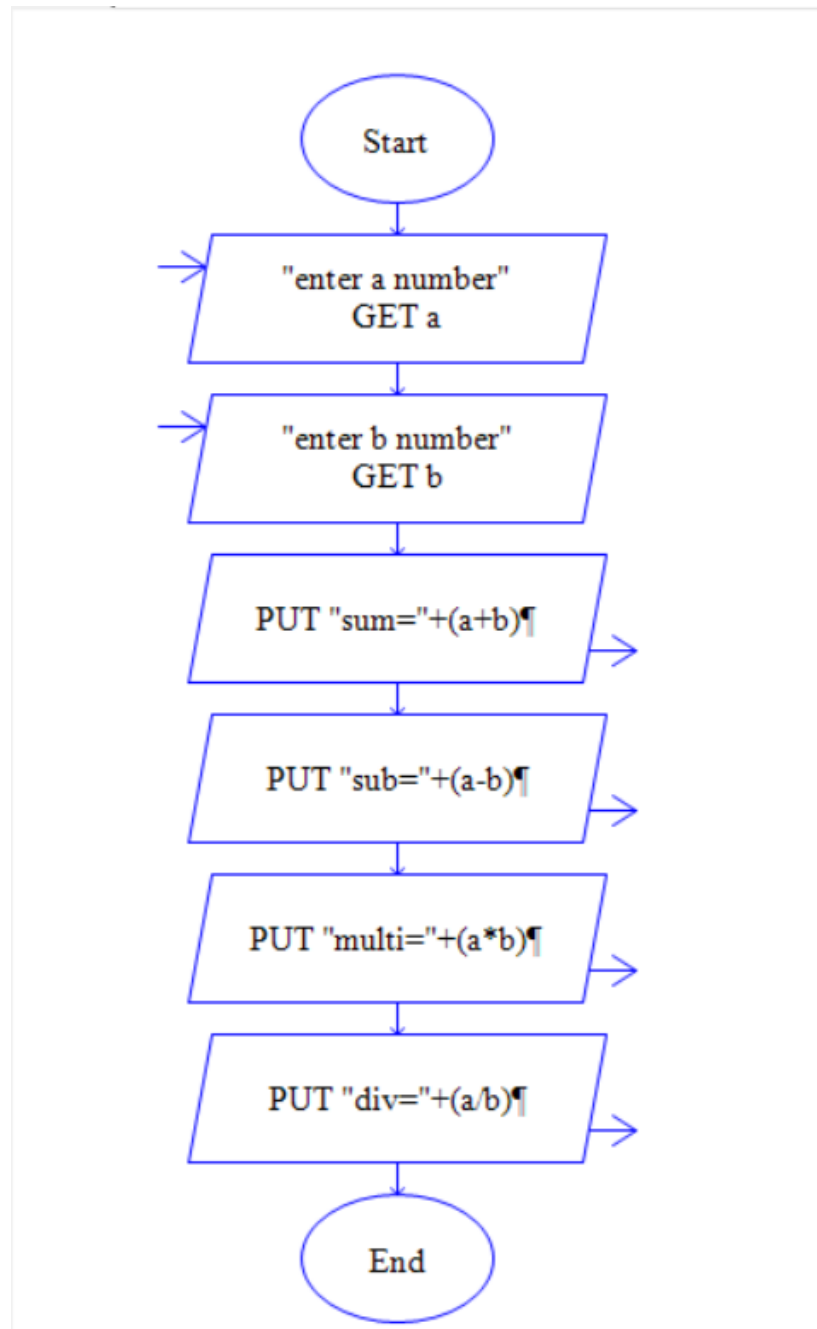
RAPTOR FLOWCHART:

```
                    ( Start )
                        |
          "enter a number"
               GET a
                        |
          "enter b number"
               GET b
                        |
          PUT "sum="+(a+b)¶
                        |
          PUT "sub="+(a-b)¶
                        |
          PUT "multi="+(a*b)¶
                        |
          PUT "div="+(a/b)¶
                        |
                    ( End )
```

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8.C Program to print n natural number.

RAPTOR FLOWCHART:
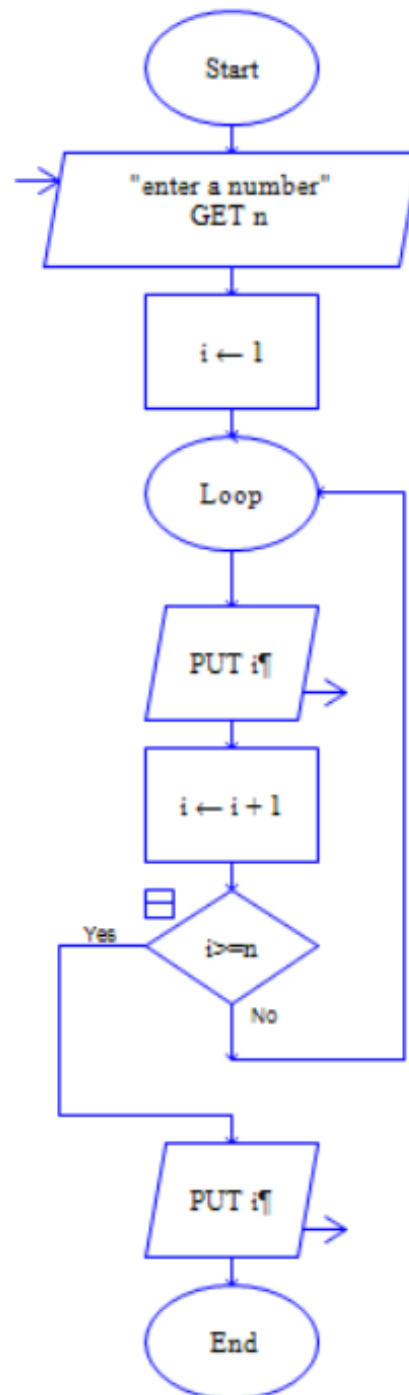
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9.C Program to find area of different shapes.

RAPTOR FLOWCHART:

```
                        ( Start )
                           │
         ┌─────────────────────────────────┐
    ───▶ │        "enter length"           │
         │          GET l                  │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
    ───▶ │        "enter breadth"          │
         │          GET b                  │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
    ───▶ │        "enter radius"           │
         │          GET  r                 │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
    ───▶ │        "enter height"           │
         │          GET h                  │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
    ───▶ │      "enter side of a square"   │
         │          GET s                  │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
         │  PUT "area of circle="+         │ ───▶
         │       (3.14*r*r)                │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
         │  PUT "area of triangle"+        │ ───▶
         │       (0.5*b*h)                 │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
         │  PUT "area of rectangle="+      │ ───▶
         │       (l*b)                     │
         └─────────────────────────────────┘
                           │
         ┌─────────────────────────────────┐
         │  PUT "area of square="+(s*s)    │ ───▶
         │                                 │
         └─────────────────────────────────┘
                           │
                        ( End )
```
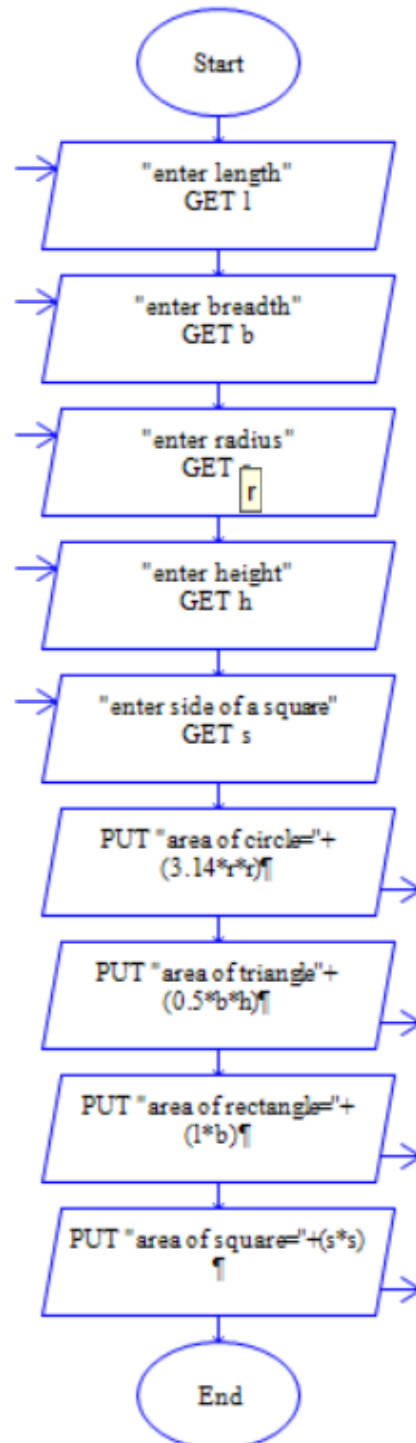
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10.C Program to check number is palindrome.

RAPTOR FLOWCHART: