Induction
Introduction to C -
        Languages
Algorithm

Algorithm - Logical flow mentioned for given problem statement

Algorithm can be represented in two ways:
1. Pseudocode - Logical flow represented using simple english language

2. Flowchart - pictorial representation of logical flow

Accept two numbers from user and display addition of them.

Pseudocode

Start
Declare num1,num2,sum

Display "Specify number"
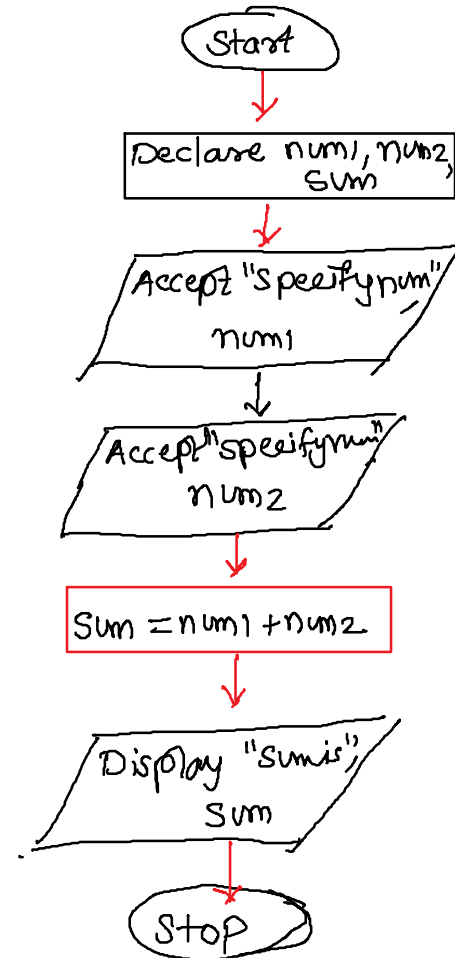Accept num1

Display "Specify number"
Accept num2

sum = num1 + num2

Display "Sum is",sum

end

Flowchart


```
        ( Start )
            |
            v
   [ Declare num1, num2,
            Sum ]
            |
            v
   / Accept "specify num" /
   /       num1          /
            |
            v
   / Accept "specify num" /
   /       num2          /
            |
            v
   [ Sum = num1 + num2 ]
            |
            v
   / Display "Sum is", /
   /       Sum        /
            |
            v
        ( Stop )
```

Decision control - If else , switch   ∨ Loop / iteration

```
1 ✓ ———— .
2 ✓ ————     }
3 ✓ ————       } sequence
4 ✓ ————     }
5 ✓ ————
```

Assign 1

```
√1 ————
√2 ————
√3 ————

√4   if  ‿‿‿.  then
         4.1  ✓
         4.2  ✓
         4.3  ✓
     else .
         4.1.1  ✗
         4.1.2  ✗
         4.1.3  ✗

     5  ————
     6  ————    Assign-2
```

```
        ————
        ————
        ————

   }  ———
      ———  repeated
      ———
   $
```

for loop
while
do ... while
         Assign 3

```
7 6 5 4 3 2 1 0
| | | | | | | |
0 1 0 0 0 0 0 1
_____
    |           |
  2⁶ × × × × 2⁰
```

$2^6 \times \times \times \times 2^0$

64 +   1

(65)

Ascii
value.   Ascii
              ↑ char   Assign-2

—   65 — A

65 - 90   — uppercase

97 - 122   — lowercase

48 - 57   — digits .