CONDITION

DECISION MAKING

CONDITIONAL STATEMENTS (DECISION MAKING)

- The basic decision statements in computer is selection structure.
- The decision is described to computer as conditional statement that can be answered True or False
- Python language provide the following conditional (decision making) statements.
    - If statement
    - If….else statement
    - If …..elif…..else statement
    - Nested if…else statement

if statement

- The if statement is a decision making statement.
- It is used to control the flow of execution of the statements and also used to test logically whether the condition is true or false.
  - Syntax:
    - if test_expression :
      - statement

Example:

- n=int(input(“enter number”))
- if(n<=10):
  - print(“condition is true”)

OUTPUT:
enter number: 6
condition is true

if…else statement

- The if…else statement is called alternative execution , in which there are two possibilities and the condition determines which one gets executed
  - Syntax:
    - if test_expression :
      - Statement of if

      else:
      - Statement of else

Example:

- n=int(input(“enter number”))
- if(n<=10):
    - print(“condition is true”)
- else:
    - print(“condition is false”)

OUTPUT:
enter number: 12
condition is false

elif statements

- Elif- is a keyword used in Python in replacement of else if to place another condition in the program. This is called chained conditional.
- Chained conditions allows than two possibilities and need more than two branches
  - Syntax:
    - if test_expression :
      - Statement of if

    elif expression:
      - Statement of elif

    else:
      - Statement of else

Example:

- n=int(input(“enter number”))
- if(n<=5):
    - print(“condition is less than 5 ”)
- elif (n<=10 and (n>5):
    - print(“condition isbetween 10 and 5”)
- else:
    - print(“condition is more than 10”)

OUTPUT:
enter number: 12
condition is more than 10

Nested if…else statements

- We can write an entire if..else statement in another if ….else statement called nesting, and the statement is called nested if.
- In a nested if construct, you can have an if…elif…else construct inside an if…elif…else construct
  - Syntax:
    - if test_expression :
      - Statement)s)
    - if test_expression :
      - Statement(s)

    elif expression:
      - Statement(s)

    else:
      - Statement(s)

Example:

- n=int(input(“enter number”))
- if(n<=15):
  - if(n==10
    - print(“ok”)
  - else:
    - print(“use another option”)
- else:
    - print(“more than 15”)

OUTPUT:
enter number: 11
use another option