|  |  |
| --- | --- |
| **Ex. No. 2**  **Date:28.04.2021** | **I/O STATEMENTS AND EXPRESSIONS** |

**AIM:**

To write Python programs using input and output statements and expressions.

**PROGRAMS:**

**a) To perform gross pay calculation**

**Description:**

Find gross salary of a person, given basic pay, DA%, TA% and PF%

Gross Pay = Basic Pay + (Basic Pay \* DA/100) + (Basic Pay \* TA/100) - (Basic Pay \* PF/100)

Sample Input:

22000

10

5

2

Sample Output:

24860

**Program:**

‘’’Name: R.sridevi

Rol.No: 20UIT021

Program Name: To perform gross pay calculation.’’’

#variable declaration

Basic\_pay=int(input())

DA=int(input())

TA=int(input())

PF=int(input())

#caluclation

Gross\_Pay=Basic\_pay+(Basic\_pay\*DA/100)+(Basic\_pay\*TA/100)-(Basic\_pay\*PF/100)

print(int(Gross\_Pay))

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **Test Case No.** | **Input** | **Expected Output** |
| 1 | 22000  10  5  2 | 24860 |
| 2 | 45000  25  20  30 | 51750 |
| **Total Test Cases** | | **2** |
| **Number of Test Cases Passed** | | **2** |

**b) To solve quadratic equation**

**Description:**

Quadradic Equation:

ax2 + bx + c = 0, where

a, b and c are real numbers and

a ≠ 0

Solutions:

(-b + (b \*\* 2 - 4 \* a \* c) \*\* 0.5) / 2 \* a

(-b - (b \*\* 2 - 4 \* a \* c) \*\* 0.5) / 2 \* a

Sample Input:

1

5

6

Sample Output:

The solutions are -3.0 and -2.0

**Program:**

‘’’Name: R.sridevi

Rol.No: 20UIT021

Program Name: To solve quadratic equation.’’’

#variable declaration

a=float(input())

b=float(input())

c=float(input())

#calculation quadratic equation

x=(-b-(b\* \*2-4\*a\*c)\* \*0.5)/(2\*a)

y=(-b+(b\* \*2-4\*a\*c)\* \*0.5)/(2\*a)

#output function

print("The solutions are{0}and{1}".format(e,f))

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **Test Case No.** | **Input** | **Expected Output** |
| 1 | 1  5  6 | The solutions are -3.0 and -2.0 |
| 2 | 8  16  8 | The solutions are -1.0 and -1.0 |
| **Total Test Cases** | | **2** |
| **Number of Test Cases Passed** | | **2** |

**RESULT:**

Thus, the Python programs are executed successfully.