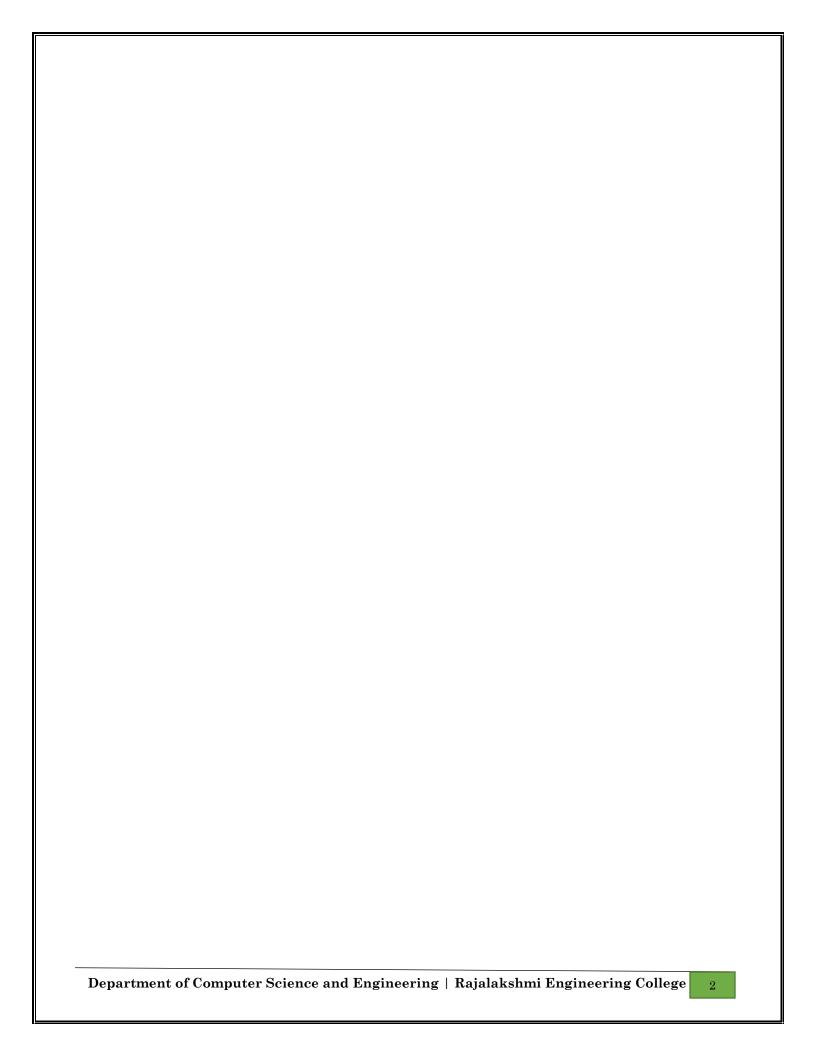# RAJALAKSHMI ENGINEERING COLLEGE

RAJALAKSHMI NAGAR, THANDALAM – 602 105

CS23221
PYTHON PROGRAMMING LAB

Laboratory Observation Note Book

Name : SREYA G

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Reg. No. : **2116230701334** Name : SREYA G

Year : 01 Branch : CSE Sec : F

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01 - Introduction to Python-Variables-Datatypes Input/Output-Formatting

Sample Output:

10,<class 'int'>

10.9,<class 'float'>

For example:

Input	Result
10 10.9	10,<class 'int'> 10.9,<class 'float'>

Converting Input Strings

Write a program to convert strings to an integer and float and display its type.

Sample Input:

10

10.9

PROGRAM:

```
a=int(input())

print(a,type(a),sep=",")

b=float(input())

print("%.1f"%b,type(b),sep=',')
```
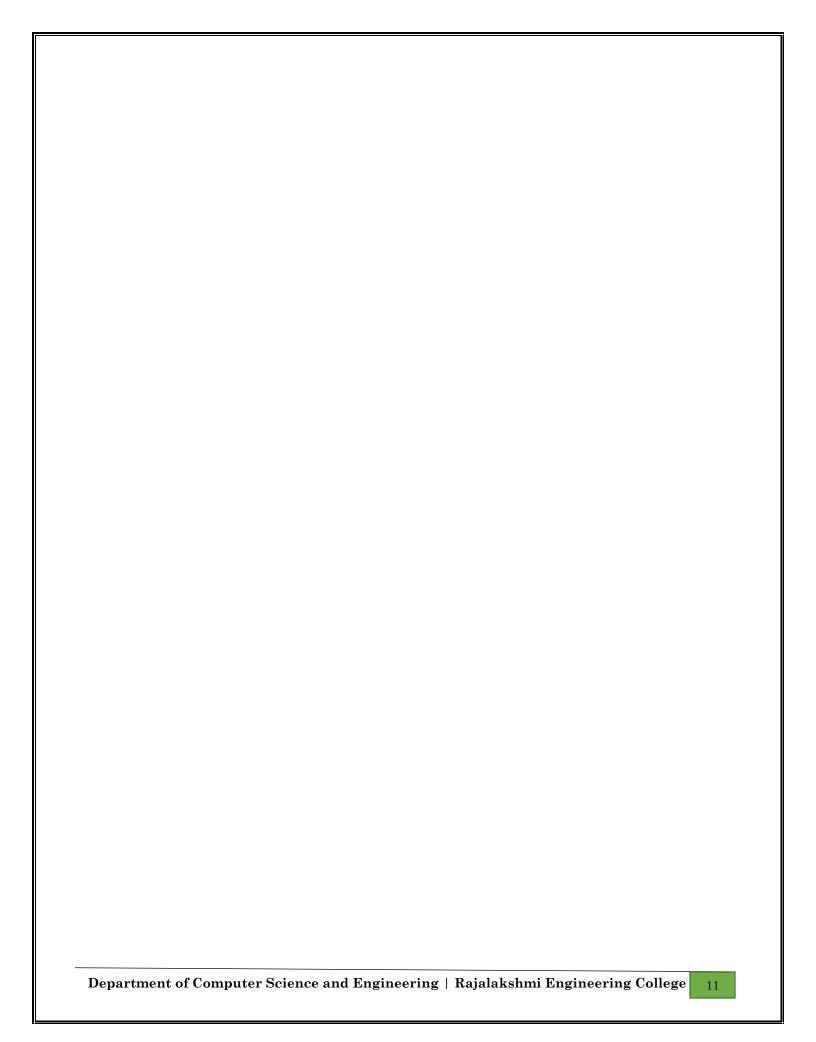
Sample Input:

10000

Sample Output:

16000

For example:

Input	Result
10000	16000

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Gross Salary

Ramesh's basic salary is input through the keyboard. His dearness allowance is 40% of his basic salary, and his house rent allowance is 20% of his basic salary. Write a program to calculate his gross salary.

PROGRAM:

```
BasicSalary=int(input())

DA=BasicSalary*(0.4)

HRA=BasicSalary*(0.2)

GrossSalary=BasicSalary+DA+HRA

print(int(GrossSalary))
```

Sample Input:

8.00

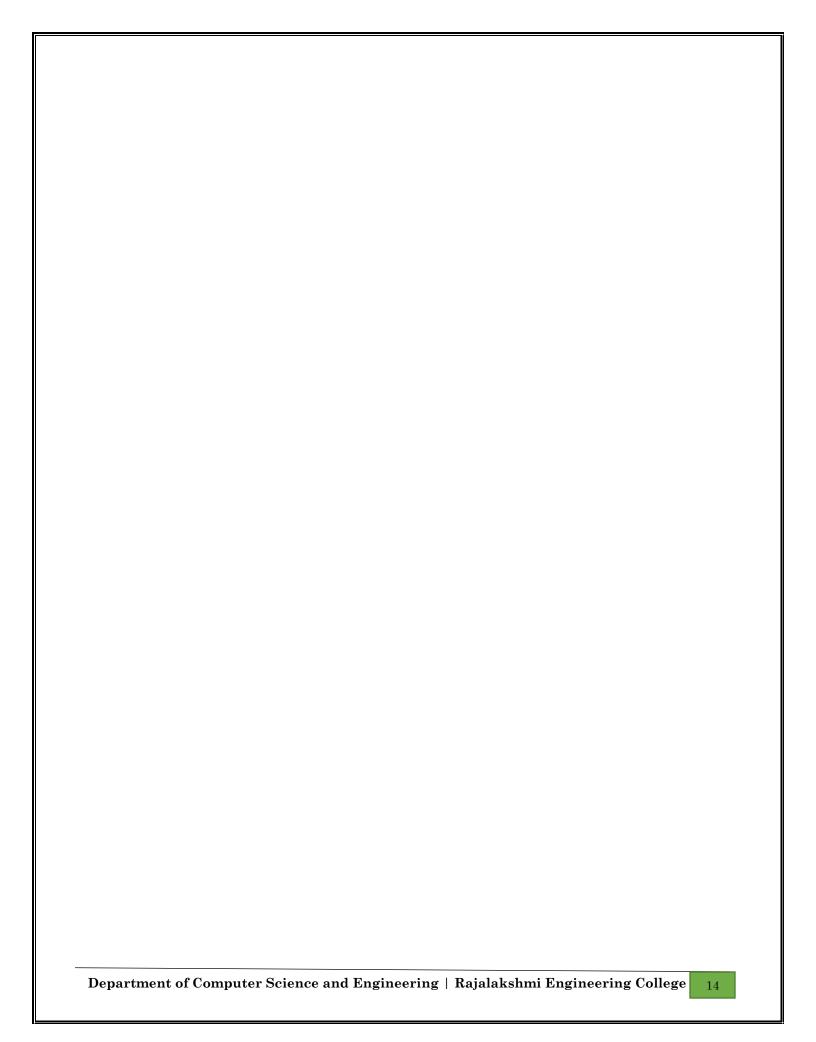Sample Output:

2.828

For example:

Input	Result
14.00	3.742

Ex. No.   :   1.3   **Date: 12.03.24**

Register No.:   230701334   **Name: SREYA G**

Square Root

Write a simple python program to find the square root of a given floating point number. The output should be displayed with 3 decimal places.

PROGRAM:

```python
import math

a=float(input())

squareroot=math.sqrt(a)

print("%.3f" %squareroot)
```

Input Format:

The first line contains the Rs X

The second line contains Rs Y

The third line contains Rs Z

Sample Input:

10000

250

15000

Sample Output:

46.34 is the gain percent.

For example:

Input	Result
45500 500 60000	30.43 is the gain percent.

Gain percent

Alfred buys an old scooter for Rs. X and spends Rs. Y on its repairs. If he sells the scooter for Rs. Z (Z>X+Y). Write a program to help Alfred to find his gain percent. Get all the above-mentioned values through the keyboard and find the gain percent.

PROGRAM:

```
x=float(input())
y=float(input())
z=float(input())
a=z-(x+y)
GrossPercent=(a/(x+y))*100
print("%.2f"%GrossPercent,"is the gain percent.")
```

Sample Input

10

20

Sample Output

Your total refund will be $6.00.

For example:

Input	Result
20 20	Your total refund will be $7.00.

Ex. No.   :   1.5   **Date: 12.03.24**

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<u>Deposits</u>

In many jurisdictions, a small deposit is added to drink containers to encourage people to recycle them. In one particular jurisdiction, drink containers holding one liter or less have a $0.10 deposit and drink containers holding more than one liter have a $0.25 deposit. Write a program that reads the number of containers of each size(less and more) from the user. Your program should continue by computing and displaying the refund that will be received for returning those containers. Format the output so that it includes a dollar sign and always displays exactly two decimal places.

PROGRAM:

a=int(input())

b=int(input())

refund=(a*0.10)+(b*0.25)

print("Your total refund will be $%.2f."%refund)

Sample Input:

450

Sample Output:

weekdays 10.38

weekend 0.38

For example:

Input	Result
450	weekdays 10.38 weekend 0.38

Carpenter

Justin is a carpenter who works on an hourly basis. He works in a company where he is paid Rs 50 for an hour on weekdays and Rs 80 for an hour on weekends. He works 10 hrs more on weekdays than weekends. If the salary paid for him is given, write a program to find the number of hours he has worked on weekdays and weekends.

Hint:

If the final result(hrs) are in -ve convert that to +ve using abs() function

The abs() function returns the absolute value of the given number.

```
number = -20
absolute_number = abs(number)
print(absolute_number)
# Output: 20
```

PROGRAM:
```
salary=int(input())
e=abs((salary-500)/130)
d=e+10
print("weekdays %.2f"%d)
print("weekend %.2f"%e)
```