

Exercise No: 1
INTRODUCTION TO PYTHON & JUPYTER NOTEBOOK

Output:

Hello, World!

Exercise No: 2
INSTALLING PYTHON AND JUPYTER NOTEBOOK USING ANACONDA DISTRIBUTION

Exercise No: 3

PRINTING OPTIONS IN PYTHON

OUTPUT :

Hello, world

This is the end. My message.

My name is Alice and I am 30 years old.

My name is Bob and I am 25 years old.

My name is Charlie and I am 35 years old.

My name is David and I am 40 years old.

Exercise No: 4

VARIABLES IN PYTHON

Output:

Product: Laptop

Quantity: 5

Price per unit: 45000.75

Available: True

Total Cost: 225003.75

Data type of product_name: <class 'str'>

Data type of quantity: <class 'int'>

Data type of price: <class 'float'>

Data type of available: <class 'bool'>

Data type of total_cost: <class 'float'>

Exercise No: 5
DATA TYPES IN PYTHON

Exercise No: 5
DATA TYPES IN PYTHON

Output:

Student Name: John

Age: 22

GPA: 8.5

Is Present: True

Age Next Year: 23

Type of student_name: <class 'str'>

Type of age: <class 'int'>

Type of gpa: <class 'float'>

Type of is_present: <class 'bool'>

Type of next_year_age: <class 'int'>

Exercise No: 6

ARITHMETIC OPERATORS IN PYTHON

Output:

a = 15 b = 4

Addition (a + b): 19

Subtraction (a - b): 11

Multiplication (a * b): 60

Division (a / b): 3.75

Floor Division (a // b): 3

Modulus (a % b): 3

Exponentiation (a ** b): 50625

Exercise No: 7	PROGRAM TO FIND AREA OF TRIANGLE
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OUTPUT

Enter breadth of a triangle: 4

Enter height of a

triangle: 6 The area of

triangle is 12.0

Exercise No: 8

PROGRAM TO FIND SQUARE ROOT

OUTPUT

Enter a number: 690

The square root of 690.000 is 26.268

Exercise No: 9

LOGICAL OPERATORS IN PYTHON

Output:

x = True y =

False x and y:

False x or y:

True

not x: False

not y: True

Exercise No: 10

SWAPPING OF TWO NUMBERS USING THIRD VARIABLE

OUTPUT

Value of x: 50

Value of y: 10

Exercise No: 11	PYTHON PROGRAM TO FIND THE LARGEST AMONG THREE NUMBERS
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OUTPUT

The largest number is 14.0.

Exercise No: 12

CONTROL STRUCTURES IN PYTHON

Output:

Number is positive

Number is even

Number is positive

For loop: Printing numbers from 1 to 5

1

2

3

4

5

While loop: Printing numbers from 1 to 5

1

2

3

4

5

Exercise No: 13	PYTHON PROGRAM DISPLAY THE MULTIPLICATION TABLE
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OUTPUT

12 x 1 = 12, 12 x 2 = 24, 12 x 3 = 36, 12 x 4 = 48, 12 x 5 = 60, 12 x 6 = 72, 12 x 7 = 84, 12 x 8 = 96, 12 x 9 = 108, 12 x 10 = 120

Exercise No: 14
FUNCTIONS IN PYTHON

Output:

Hello, Alice Welcome to Python Programming!

Hello, Bob Welcome to Python Programming!

OUTPUT

Select operation.

1.Add

2.Subtract

3.Multiply

4.Divide

Enter choice(1/2/3/4): 3

Enter first number: 15

Enter second number: 14

15.0 * 14.0 = 210.0

Let's do next calculation? (yes/no): no

Exercise No: 16
STRING OPERATIONS IN PYTHON

Output:

Concatenation: Hello World

Repetition: HelloHelloHello

Slicing: Wor

Length of str1: 5

Upper case: HELLO

Lower case: world

Replaced string: Python

Split string: ['Python', 'Programming']

Exercise No: 17	PYTHON PROGRAM TO CHECK WHETHER A STRING IS PALINDROME OR NOT
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OUTPUT

The string is a palindrome.

Exercise No: 18

PYTHON PROGRAM TO COMPUTE THE POWER OF A NUMBER

OUTPUT

81

Exercise No: 19	PYTHON PROGRAM TO COUNT THE NUMBER OF DIGITS PRESENT IN A NUMBER
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OUTPUT

Number of digits: 4

Exercise No: 20

INSTALLING & USING PACKAGES IN PYTHON

Output

Array: [1 2 3 4 5]

Mean of Array: 3.0

Exercise No: 21
FILE HANDLING IN PYTHON

Output:

File Content:

Hello, this is the first line.

Python File Handling Example.

This line is appended to the file.

Exercise No: 22
LIST IN PYTHON

Output

Original List: ['apple', 'banana', 'cherry']

First fruit: apple

Last fruit: cherry

After modification: ['apple', 'mango', 'cherry']

After appending: ['apple', 'mango', 'cherry', 'orange']

After inserting grapes: ['apple', 'grapes', 'mango', 'cherry', 'orange']

After removing cherry: ['apple', 'grapes', 'mango', 'orange']

After popping last element: ['apple', 'grapes', 'mango']

Sorted List: ['apple', 'grapes', 'mango']

Reversed List: ['mango', 'grapes', 'apple']

Exercise No: 23
TUPLE IN PYTHON

Output

Tuple Elements: (10, 20, 30, 40, 50)

First Element: 10

Last Element: 50

Slice from 1 to 3: (20, 30, 40)

Error: 'tuple' object does not support item assignment

Mixed Tuple: (1, 'Python', 3.14, True)

Nested Tuple: (1, 2, (3, 4, 5))

Exercise No: 24
DICTIONARY IN PYTHON

Output

Student Dictionary: {'name': 'Rahul', 'age': 21, 'course': 'BBA', 'marks': 88}

Name: Rahul

Age: 21

After Adding Semester: {'name': 'Rahul', 'age': 21, 'course': 'BBA', 'marks': 88, 'semester': 5}

After Updating Marks: {'name': 'Rahul', 'age': 21, 'course': 'BBA', 'marks': 92, 'semester': 5}

After Deleting Course: {'name': 'Rahul', 'age': 21, 'marks': 92, 'semester': 5}

Exercise No: 25
SETS IN PYTHON

Output:

Initial Set: {'apple', 'banana', 'cherry'}

After Adding Orange: {'apple', 'banana', 'cherry', 'orange'}

After Removing Banana: {'apple', 'cherry', 'orange'}

Union: {1, 2, 3, 4, 5, 6}

Intersection: {3, 4}

Difference: {1, 2}

Exercise No: 26
DATA SLICING IN PYTHON

Output

1. Single Column (Name):

```
0    Alice
1     Bob
2   Charlie
3    David
4     Eva
```

Name: Name, dtype: object

Exercise No: 27

IMPORTING CSV DATA IN PANDAS

Output

	Name	Age	Marks
0	John	20	85
1	Mary	21	90
2	Alex	19	78
3	Sara	22	88
4	Tom	20	92

Exercise No: 28
IMPORTING EXCEL DATA IN PANDAS

Output

	Name	Age	Marks
0	John	20	85
1	Mary	21	90
2	Alex	19	78
3	Sara	22	88
4	Tom	20	92

Exercise No: 29	INTRODUCTION TO R PROGRAMMING
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Exercise No: 30	HOW TO INSTALL R PROGRAMMING
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Exercise No:31	UNDERSTANDING BASIC COMMANDS IN R
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Exercise No: 32	IMPORTING & EXPORTING DATA IN R
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OUTPUT

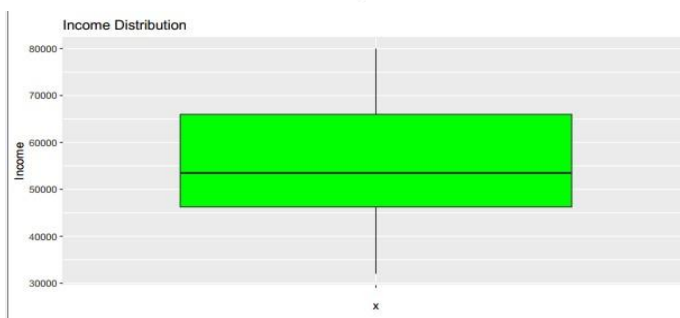
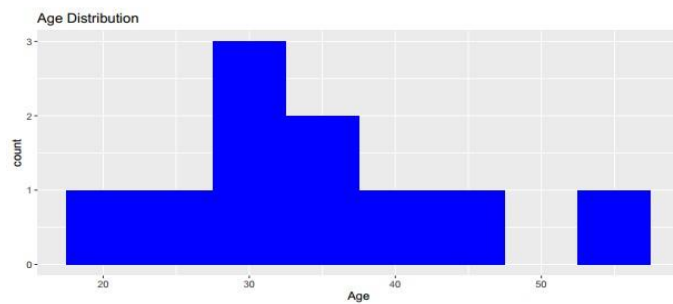
ID	Age	Income	Education	Gender
1	1	25	40000	High School Male
2	2	30	50000	Bachelor's Female
3	3	22	32000	High School Male
4	4	40	60000	Master's Female
5	5	35	55000	PhD Male
6	6	28	45000	Bachelor's Male

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
22.00	28.25	32.50	34.60	39.25	55.00

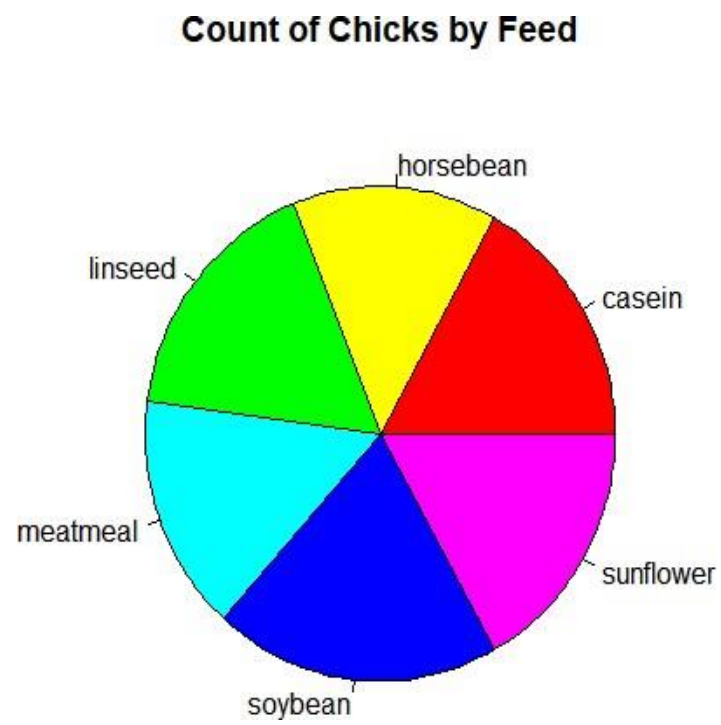
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
32000	46250	53500	55700	66000	80000

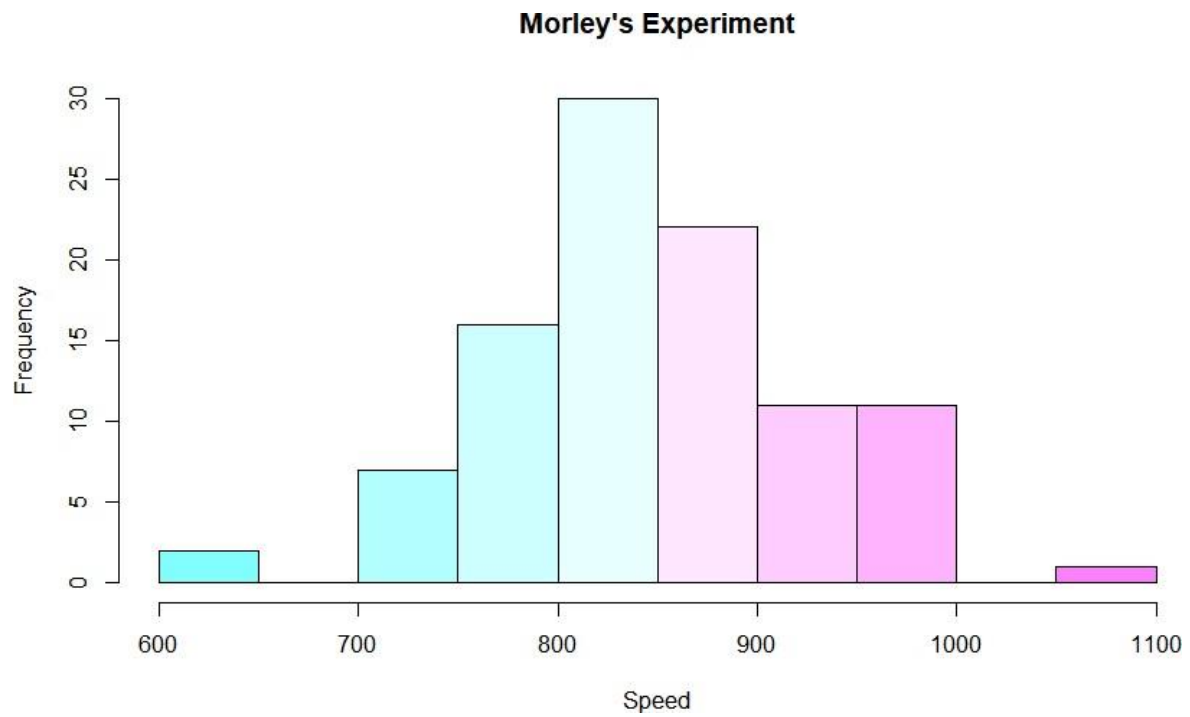
Bachelor's	High School	Master's	PhD
3	2	2	3

Female	Male
4	6

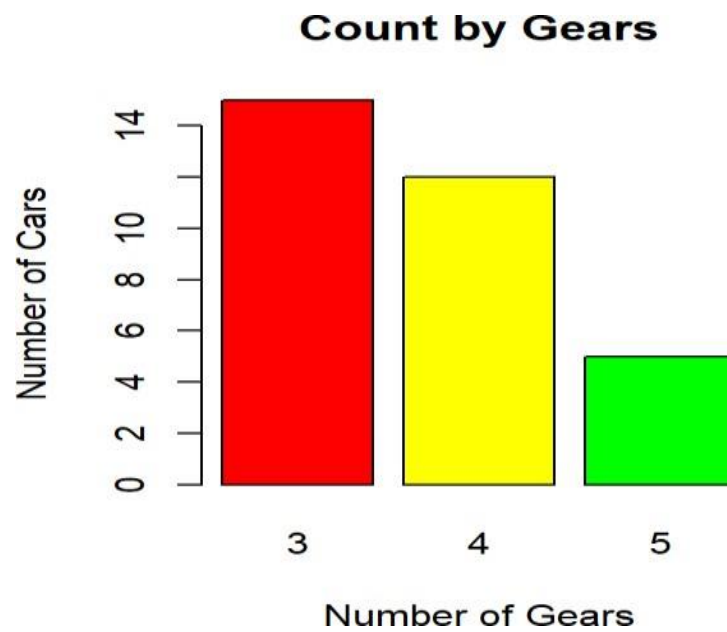


Output:

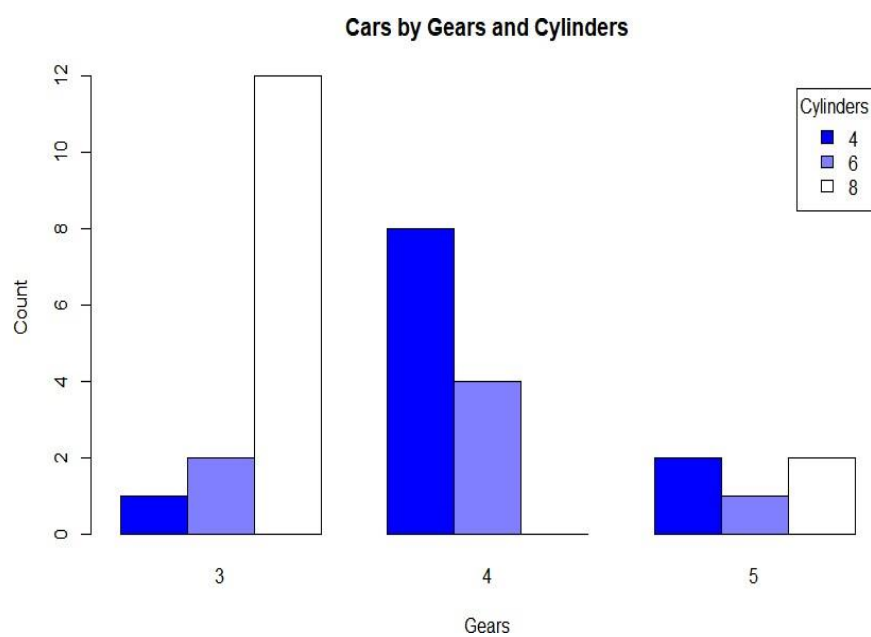


Output:

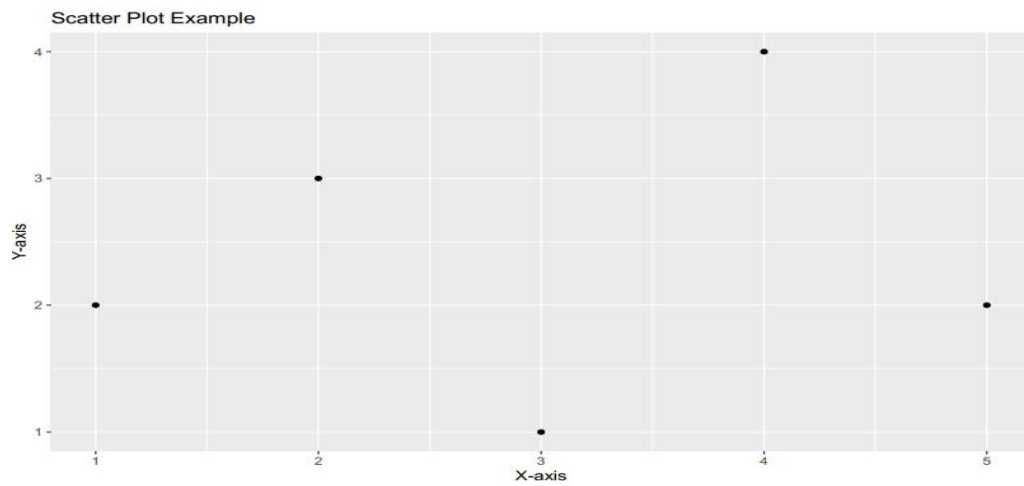
Output:



Clustered Bar Plot



Output



Output

The frequency distribution of the schools is:

```
> school.freq school
```

```
A B C D E F G H
```

```
10 6 6 10 7 4 7 4
```


Exercise No: 40	CORRELATION IN R
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