**Programming Fundamentals:**

* Identifiers
* Variables
* Data types
* Operators

1. Arithmetic Operator
2. Relational Operator
3. Assignment Operator
4. Bitwise Operator
5. Logical Operator
6. Identity Operator

**Control Structure:**

* If-else
* If-elif-else
* Loop statement

1. While loop
2. For loop
3. Range

**Data Structure:**

* Strings

Operations you can apply:

1. Concatenation
2. Repetition
3. Indexing
4. Slicing
5. Size

* List

1. Append
2. Extend
3. Insert
4. Remove
5. Pop
6. Clear
7. Index
8. Count
9. Reverse
10. Copy

* Tuples
* Sets
* Dictionaries

**Assignments:**

1. Write a program which accepts a number from user and display that number if and only if it is positive value.

2. Write a program which accepts average marks of student and if average is greater than 40 then it will display a message “Congratulation!!! You pass this exam successfully” else it will display “Sorry!!! Better luck next time”.

3. Write a program which accepts marks of five subject and based on average of those marks it will display appropriate grade.

4. Write a program to find largest number out of three numbers entered by user.

5. Write a program to check whether entered number is prime or not.

6. Write a program that stores following names in a list.Also write instruction to iteratively print names from the list. ‘ramu’, ‘shyamu’, ‘kanu’, ‘manu’, ‘ramu’, ‘radha’, ‘manu’.

7. Write a program to remove duplicates from the list (created in (6)) and print unique names.

8. Write a program to print all unique values in a dictionary. Sample Data : [{"V":"S001"}, {"V": "S002"}, {"VI": "S001"}, {"VI": "S005"}, {"VII":"S005"},{"V":"S009"},{"VIII":"S007"}] Output : Unique Values: {'S005', 'S002', 'S007', 'S001', 'S009'}

9. Following are the lists of students studying Maths, Physics and Chemistry subjects, Maths = {1, 2, 3, 5, 7, 9} Physics = { 2, 4, 6, 9} Chemistry = {1, 3, 5, 9}

10. Display the numbers which are studying both maths & physics, physics & chemistry, maths & chemistry and all three. Also, display the numbers which are studying exactly one of the three subjects.

11. Write a program to create a record of student details. The record maintains following information < student\_id, name, age, percentage>. Record1 : 1, ‘ram’, ‘18’, 65% Record 2 : 2, ‘shyam’, 17’, 70%

12. Add following records to the ‘student\_record’ created in (11)

Record 3 : 3, ‘Radha’, ‘17’, 75%

13. Basic programs of programing fundamentals.

14. Basic programs of Control Structure.

15. Basic programs of Data Structure.

**References:**

1. CC\_PY\_Basic.pdf
2. CC\_PY\_Basic\_Assignments.pdf
3. day\_1\_supportingDoc.pdf