**Module – 4 (Advance python programming)**

1. What is File function in python? What is keywords to create and write file.

Python file object provides methods and attributes to access and manipulate files. Using file objects, we can read or write any files. Whenever we open a file to perform any operations on it, Python returns a file object. To create a file object in Python use the built-in functions, such as open()

To create a new file in Python, use the open() method

"w" - Write - will create a file if the specified file does not exist.

1. Explain Exception handling? What is an Error in Python?

 exceptions are raised when some internal events occur which changes the normal flow of the program. Two types of Error occurs in python. Syntax errors. Logical errors (Exceptions)

1. How many except statements can a try-except block have? Name Some built-in exception classes:

There has to be at least one except statement.

* exception BaseException. This is the base class for all built-in exceptions. ...
* exception Exception. This is the base class for all built-in non-system-exiting exceptions. ...
* exception ArithmeticError. ...
* exception BufferError. ...
* exception LookupError.

1. When will the else part of try-except-else be executed?

The else part is executed when no exception occurs.

1. Can one block of except statements handle multiple exception?

try-except blocks can be used to catch and respond to one or multiple exceptions. In cases where a process raises more than one possible exception, they can all be handled using a single except clause.

1. When is the finally block executed?

The finally block always executes when the try block exits. This ensures that the finally block is executed even if an unexpected exception occurs.

1. What happens when „1‟== 1 is executed?

It simply evaluates to False and does not raise any exception.

1. How Do You Handle Exceptions With Try/Except/Finally In Python? Explain with coding snippets.

First try clause is executed i.e. the code between try and except clause. If there is no exception, then only try clause will run, except clause will not get executed. If any exception occurs, the try clause will be skipped and except clause will run.

1. What are oops concepts? Is multiple inheritance supported in java

In Python, object-oriented Programming (OOPs) is a programming paradigm that uses objects and classes in programming. It aims to implement real-world entities like inheritance, polymorphisms, encapsulation, etc. in the programming. Java does not support Multiple Inheritance

1. How to Define a Class in Python? What Is Self? Give An Example Of A Python Class

Class is a collection of functions and variables. SELF represents the instance of class. This handy keyword allows you to access variables, attributes, and methods of a defined class in Python. The self parameter doesn't have to be named “self,” as you can call it by any other name.

class Bike:

name = ""

gear = 0

# create object of class

bike1 = Bike()

# access attributes and assign new values

bike1.gear = 11

bike1.name = "Mountain Bike"

print(f"Name: {bike1.name}, Gears: {bike1.gear} ")

1. Explain Inheritance in Python with an example? What is init? Or What Is A Constructor In Python?

A parent class is a class whose properties are inherited by the child class. Let’s create a parent class called **Person**which has a **Display**method to display the person’s information.

class Person(object)

  # Constructor

  def \_\_init\_\_(self, name, id):

    self.name = name

    self.id = id

  # To check if this person is an employee

  def Display(self):

    print(self.name, self.id)

# Driver code

emp = Person("Satyam", 102) # An Object of Person

emp.Display()

Constructors are generally used for instantiating an object. The task of constructors is to initialize(assign values) to the data members of the class when an object of the class is created. In Python the \_\_init\_\_() method is called the constructor and is always called when an object is created.

1. What is Instantiation in terms of OOP terminology?

the processes of creating a new object for a class using a new keyword.

1. What is used to check whether an object o is an instance of class A?

The `isinstance()` function can be used to check if an object is an instance of a particular class.

1. What relationship is appropriate for Course and Faculty?

Association relationship is appropriate for Course and Faculty

1. What relationship is appropriate for Student and Person?

Inheritance relationship is appropriate for Student and Person