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

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

>> To create a new file in Python, use the open() method, with one of the following parameters: "x" - Create - will create a file, returns an error if the file exist. "a" - Append - will create a file if the specified file does not exist. "w" - Write - will create a file if the specified file does not exist.

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

>> An error is an issue in a program that prevents the program from completing its task. In comparison,an exception is a condition that interrupts the normal flow of the program. Both errors and exceptions are a type of runtime error, which means they occur during the execution of a program.

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

>> try-except block can have multiple except statement to handle different types of exception.

Some built-in exception classes include:

1.zerodivisionerror

2.valueerror

3.typeerror

4.filenotfounderror

5.indexerror

Each exception class addresses a specific type of error that may occur during program execution.

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?**

>> Yes, a single block of except statements in Python can handle multiple exceptions.

1. **When is the finally block executed?**

>> A finally block always executes, regardless of whether an exception is thrown.

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.**

>> To handle the exception, we have put the code, result = numerator/denominator inside the try block. Now when an exception occurs, the rest of the code inside the try block is skipped. The except block catches the exception and statements inside the except block are executed.

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

>> OOP concepts include abstraction, encapsulation, inheritance and polymorphism. Basically, Java OOP concepts let us create working methods and variables, then re-use all or part of them without compromising security.java does not support multiple inheritance.

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

>> A class in Python can be defined using the class keyword. The self-parameter is a reference to the current instance of the class, and is used to access variables that belongs to the class.

class MyClass:

def hello(self):

print("Hello, world!")

obj = MyClass()

obj.hello()

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

>> Just like a parent-child relationship, inheritance works on derived classes relative to the base class.

Every “Derived” class inherits from a “Base” class.

ex:

class Country:

def ShowCountry(self):

print(“This is india”);

class State(Country):

def ShowState(self):

print(“This is State”);

obj =State();

obj.ShowCountry();

obj.ShowState();

init:

>> The \_\_init\_\_ method is the Python equivalent of the C++ constructor in an object-oriented approach.

The \_\_init\_\_ function is called every time an object is created from a class.

1. **What is Instantiation in terms of OOP terminology?**

>> Instantiation describes 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?**

>> To check if an object o is an instance of class A in Python, use the isinstance (o, A) function. It returns True if o is an instance of class A, and False otherwise.

1. **What relationship is appropriate for Course and Faculty?**

>> A course is associated with a faculty. This typically implies a one-to-many relationship, where one faculty member can be associated with multiple courses. You might have a Course class with a faculty member as an attribute or a list of faculty members if there can be multiple instructors.

1. **What relationship is appropriate for Student** **and Person?**

>> Inheritance (Subclassing): In many cases, a student is a specialized type of person. Inheritance can be used to model this "is-a" relationship. The Student class can inherit from the Person class, inheriting common attributes and behaviors.