**Python Assignment**

**Module 1(SDLC)**

Question 1: What is Software?

Ans1: Software is a set of instructions, programs and data which tell a computer to perform a specific tasks.

Question 2: What are the types of Applications?

Ans2: There are many types of applications like Web browsers, Application development software, Multimedia software, Gaming software, Database software, Penetration testing software but we’ll see few of them as below.

* Web browsers: Web browsers are the most common type of application which comes pre-installed on every system such as Google Chrome, Microsoft Edge and Firefox. It requires an internet connection to search and navigate websites using a browser.
* Multimedia software: Multimedia software is used to create, play and record audio & video files. It can also combine text, images, animation and video to produce interactive content. It is used in many fields such as art, education and entertainment.
* Database software: Database software is used to create, edit and maintain database files, records, data entry and data editing, updating and reporting.

Question 3: What is Programming?

Ans3: Programming is a technical process for telling a computer to perform a task to solve a problem. It is a partnership between humans and computer, in which humans create a code in the language that computer can understand.

Question 4: What is Python?

Ans4: Python is a computer programming language which is used to build websites, software, any automatic tasks and analyse the data. It is an interpreted, object-oriented and general-purpose programming language.

**Module 2(Fundamentals of Python)**

Question 1: How memory is managed in python?

Ans1: In Python, objects are stored in a private heap region. The Python memory manager is in charge of the heap, which is a section of memory. Allocating memory for new objects and releasing memory for objects that are discontinued in use are the responsibilities of the Python memory manager. To keep track of how many objects are referring a specific object, Python utilizes reference counting. The object is scheduled for garbage collection when its reference count is zero. When something is designated for garbage collection, the garbage collector periodically searches the heap for it. When the garbage collector finds an object that is marked for garbage collection, it frees the memory that was allocated for that object.

Question 2: What is the purpose of continue statement in python?

Ans2: Continue is used to skip the current block, and return to the "for" or "while" statement.

Example: Prints out only odd numbers : 1, 3, 5, 7, 9

for x in range(10):

# Check if x is even

    if x % 2 == 0:     # if reminder will be 0 than it will skip the current number and jump to the next number.

      continue

    print(x)