**PYTHON Q & A**

* What is Python and why is it popular?  
  ANS:
  + python is a high-level flexible programming language used to build web applications, it is dynamically typed and garbage   
    collected.
  + It supports object oriented, structural and functional programming.
  + It is Open source which is free to use.
  + It is popular as it is in simple English and easy to understand, very efficient & fast to develop.
  + It supports wide range of libraries for development.
* What are the differences between Python 2 and Python 3?  
  ANS:
  + In python2 print is considered as a statement and not function but in python3 print is considered as function   
    not statement.
  + For iteration in py2 xrange() function is used and in py3 range() function is used.
  + py2 had more complex syntax and py3 has more easy syntax.
  + strings are stored as ASCII in py2 but UNICODE in py3.
  + Exceptions are enclosed in notations in py2 but in parentheses in py3.
  + variable leakage is in py2 but it is contained in py3.
* What is the difference between a tuple and a list in Python?  
  ANS: In List we can append a new value or pop(remove) an existing value, but in tuple once a tuple has been set,  
   we cannot perform any changes;   
   List is ordered and can be changed but tuples are ordered and unchanged  
   Both allows duplicates
* How do you create a dictionary in Python?  
  ANS: a dictionary can be created as normal variables but with key & value pairs, any datatype can be   
   stuffed inside a variable using key & value pairs
* What is a function in Python and how do you define one?  
  ANS: A function is an building blocks of code created for reusable purpose.  
   A function can be created using def keyword
* What is object-oriented programming (OOP) and how does it relate to Python?  
  ANS:
  + python is an easy language and OOP concept is majorly applied for code reusability and code maintainability.
  + When applying OOP in python, the code become versatile to use, the major pillars of OOP is abstraction, encapsulation, inheritance, polymorphism.
* How do you handle exceptions in Python?  
  ANS: Using try except block we can handle exception
* How do you read and write files in Python?

ANS: Using read() method to read the file and write() method to write the file, before that we must use open() method to open the file

* How do you install and use external packages in Python?  
  ANS: using pip we can install external packages and using imports we can use the external packages
* How do you use the "if" statement in Python to perform conditional execution?  
  ANS: Using the (AND, OR, NOT) condition to evaluate the Boolean expression followed by colon(:)