**Programming Paradigms & Tools**

1. **In your own words, describe the difference between procedural programming, object-oriented programming, and event driven programming (no more than 150 words).**

Procedural programming: involves writing step-by-step list of instructions to be executed to complete the task. In procedural language, a large program is divided or broken down into procedures which are also known as routines, subroutines, functions, or methods that contain a series of steps to be executed.

Object-oriented programming: it is about creating objects that contain data in the form of fields known as attributes or properties and code, in the form of procedures often known as methods. In Object-oriented programming, a relationship between one object and another can be created.

Event-driven programming is a programming paradigm designed to detect events as they occur and deal with them using an appropriate event-handling procedure. The execution of a code is determined by events such as a user clicking a mouse, key pressed, finger tap or a message from another program.

1. **True or false – A programming language may only be classified into one paradigm**

False

1. **True or false – Event driven programming is a more advanced paradigm than Object-Oriented programming**

True

1. **List 7 tools available to a developer along with a short description of what they’re for and at least one example for each**

* Compiler – is a computer program that translates a source code from high-level programming language to a machine code. e.g. Javac
* Debuggers – is a computer program used to test and debug a program step by step to identify a problem and rectify it e.g. Visual Studio debugger
* Version control – is a system responsible for recording changes to a file or set of files over time so that a specific version can be recalled later. e.g. Git
* Code sharing - e.g. Brackets
* Source code editors – is a text editor program designed for editing source code of computer programs. e.g. sublime, notepad++
* GUI generators - is a software that allows the designer to develop a graphical user interface by dragging and dropping icons from a toolbar onto the interface window and editing them with graphic tools. E.g. Eclipse WindowBuilder
* Bug database – is a major component of a bug tracking system that records facts about known bugs. e.g. bugzilla

1. **What does IDE stand for?**

Integrated Development Environment

1. **What does an IDE do?**

It provides comprehensive facilities to computer programmers for software development. It is used to write code, test for errors, and translate a program.