Diploma in Computer Programming with Java

September 2024
Wednesdays - 6:30pm to 9:30pm
Please note this is a provisional timetable and subject to change:

Month	Day	Content
September	25	Introduction to Java Programming: In this class, you will learn to use the Java Development kit to create Java programs that print text to the screen, obtain input from the user, perform calculations, and print results on the computer screen. (You will be instructed to prepare your computer for Java programming before the course begins.)
October	02	Introduction to Classes and Objects: You will be introduced to OOP (Object Oriented Programming). You will learn to create Java programs using multiple files and simulate real-world objects.
	09	Java Control Structures: You will learn fundamental problem-solving techniques and the basic programming structures that allow your program to make decisions (if/if..else statements) and repeat code (repetition structures).
	16	
	23	Methods A Deeper Look – You will learn to create a class (static) and object methods and understand the mechanism for passing information between processes. You will learn to overload methods and manage the scope and lifetime of methods and objects.
	30	The Collections Framework Arrays and ArrayLists: You will learn how to use data structures to store and process efficiently a large amount of data in memory.
November	06	Classes and Objects a Deeper Look: In this class, we will explore object-oriented programming concepts, such as data hiding and encapsulation, and learn how to create abstract data types. You will learn how to organise classes as packages that promote software reuse. We will also cover software reuse using composition.
	13	Object Oriented Programming Inheritance and Polymorphism. You will learn how to effectively reuse existing classes to create new classes and promote efficient software development.
	20	Exception Handling: You will learn to use the Java exception (error) handling mechanism to create robust software by handling exceptions (errors). At the same time, the program runs, allowing your program to recover from the problem and continue.

	27	File I/0 (file input/output): In this class, you will learn how to create, read and update text and binary files. You will learn how to manage files and folders.
December	**04**	Graphical User Interface (GUI): In this class, you will learn how to create graphical user interfaces to create programs that respond to mouse and keyboard actions. You will learn GUI design principles and how to use layout managers and generate and manipulate buttons, labels, lists, text fields and panels.
	11	Project Example: In this final class, we will build an application similar to your end-of-course project and combine many of the features of Java previously covered into a single application.

IBAT College Dublin

16 – 19 Wellington Quay
Dublin 2
Call: 01 807 5055
Email: enquiry@ibat.ie
Website: www.ibat.ie