IT is gr8! @ Grade 11

Delphi

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Preface

This book has been developed as a sequel to the book *IT is gr8! @ Grade10.* Therefore, in explaining new concepts and setting up activities, we assume that you are able to develop programs using Scratch as programming language, and that you are able to

- identify the input and output of a program
- plan your programs using flowcharts and pseudo code
- write programs to implement basic mathematical operations and functions, decision making, repetition, string manipulation, data validation and the use of numbered lists.

We also assume that you are able to differentiate between data types – such as number values (integer and real), Boolean and string values.

In this book we will teach you how to plan, design and develop programs in the Delphi programming language. All the basic programming principles you have learnt through the use of Scratch, are applicable in Delphi. Added to that you will also learn how to

- use other tools to plan programs such as IPO tables, TOE charts and Use Case diagrams
- identify and implement more data types
- build user-friendly and effective program interfaces
- use pre-written Delphi code
- use more advanced data validation and program debugging techniques
- store and retrieve data from text files
- use Delphi's numbered lists (arrays)
- connect to an Access database using Delphi code, and process and manipulate data.

This book can be used with different versions of Delphi, such as Delphi 7 and Delphi 2010. Although the instructions are mainly based on Delphi 2010, you will not have any difficulty in interpreting instructions and completing activities.

We wish you all the best in advancing your programming and problem solving skills!

This book covers the Solution Development (programming) section of the Grade 11 IT curriculum. It should be used along with the *IT is gr8! @ Grade 11 – Theory* textbook which covers the topics of Systems Technologies, Communication Technologies, Internet Technologies, Social implications and Data and Information Management.

The Study Opportunities team

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