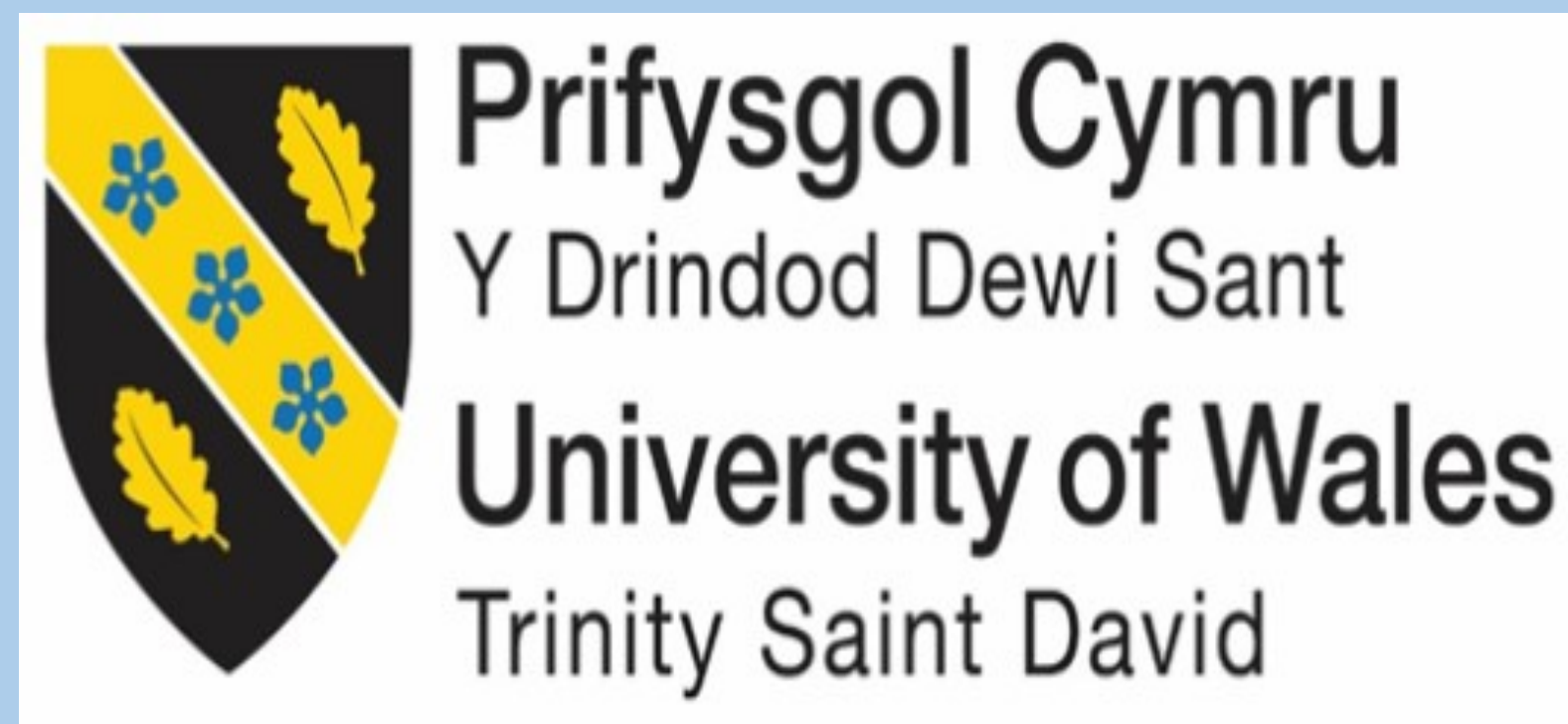




Major Project

An investigation into the use of software for students to learn a computing language in secondary schools

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1) Introduction

This project is an investigation into the use of software for students to learn a computing language in secondary schools and to create a tool that does this.

2) Aims and Objectives

The aim of this project was to investigate the use of software for students to learn a computing language in secondary schools and to create a tool that does this.

The first objective was to carry out a full literature review. The second objective was to design the tool.

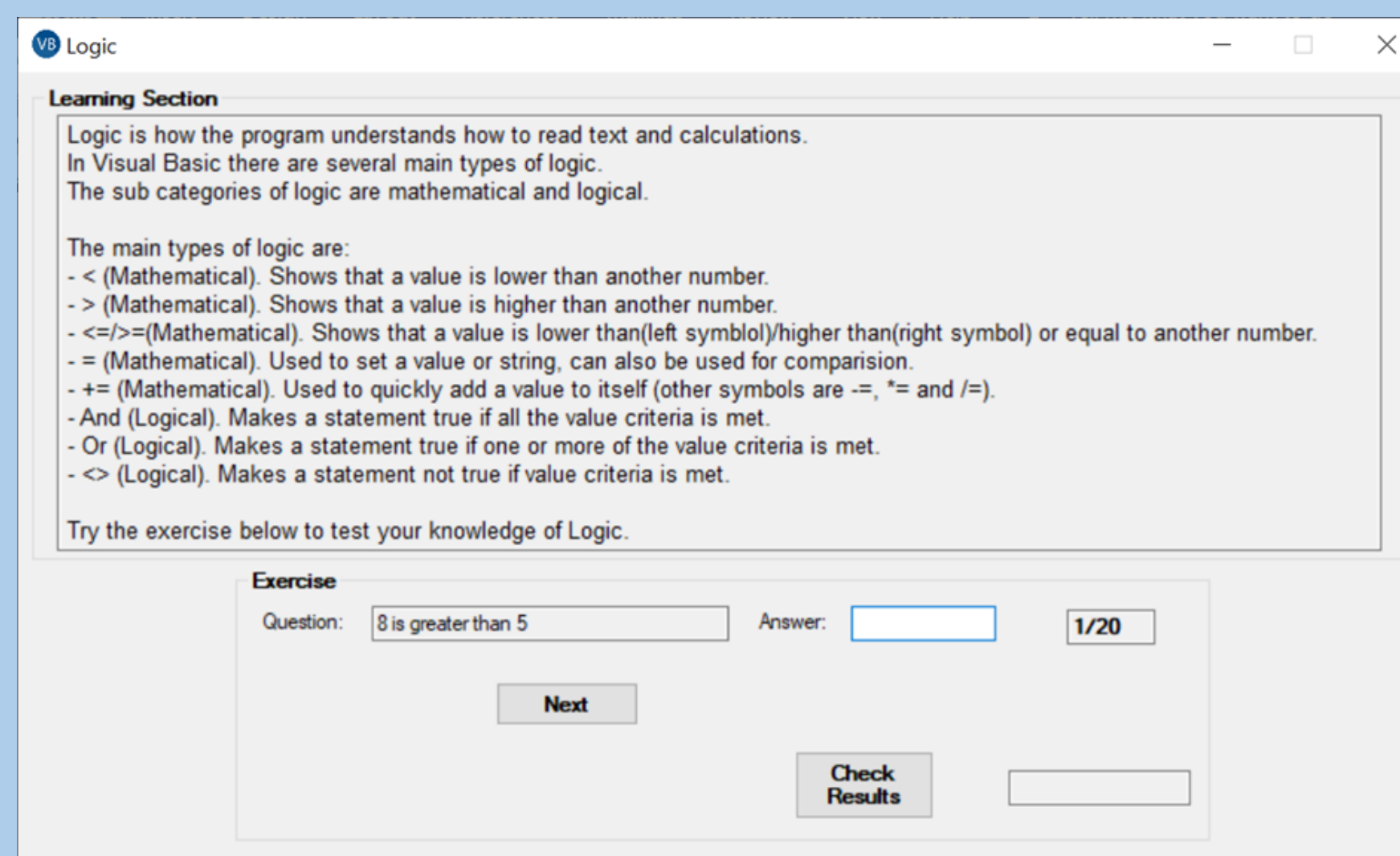
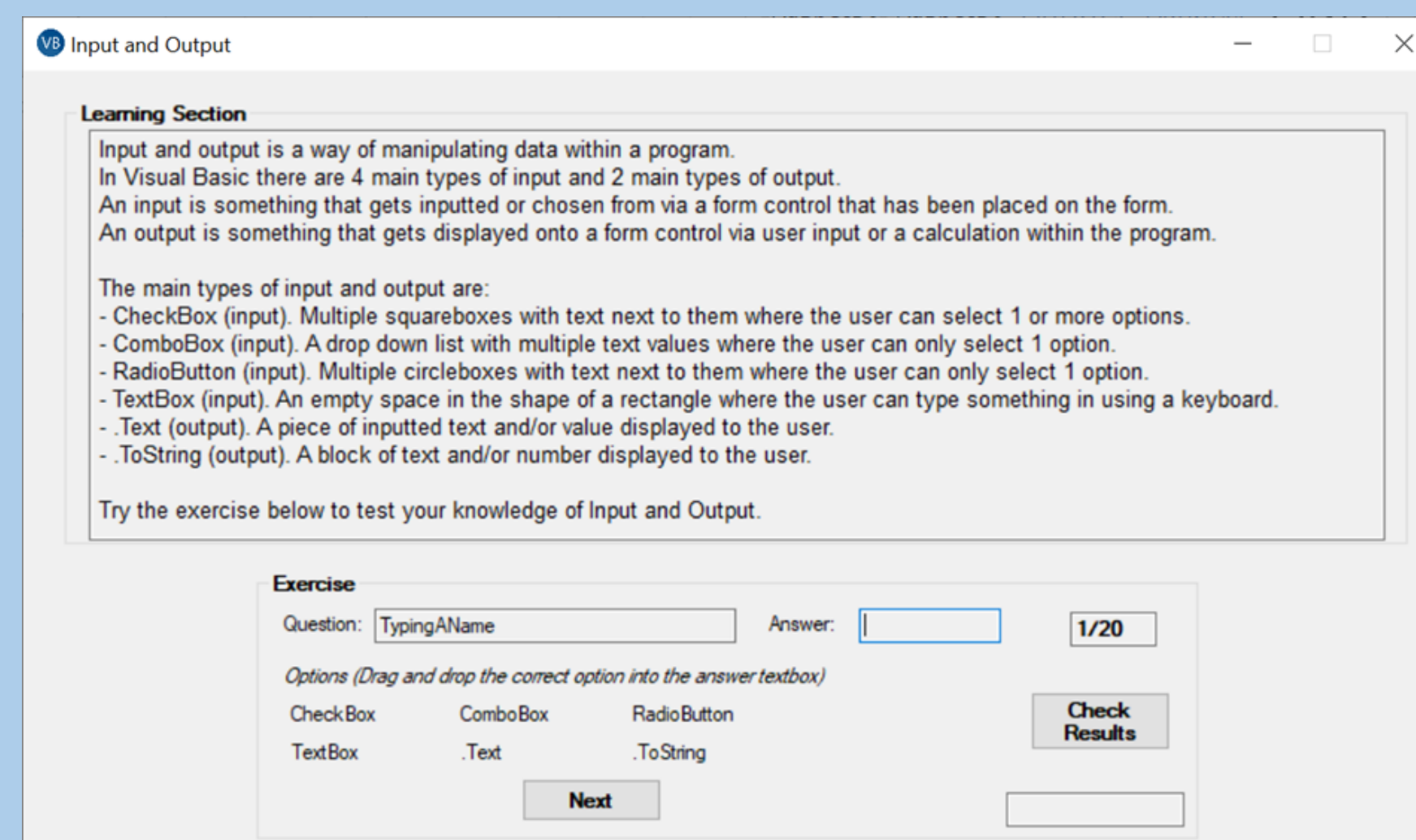
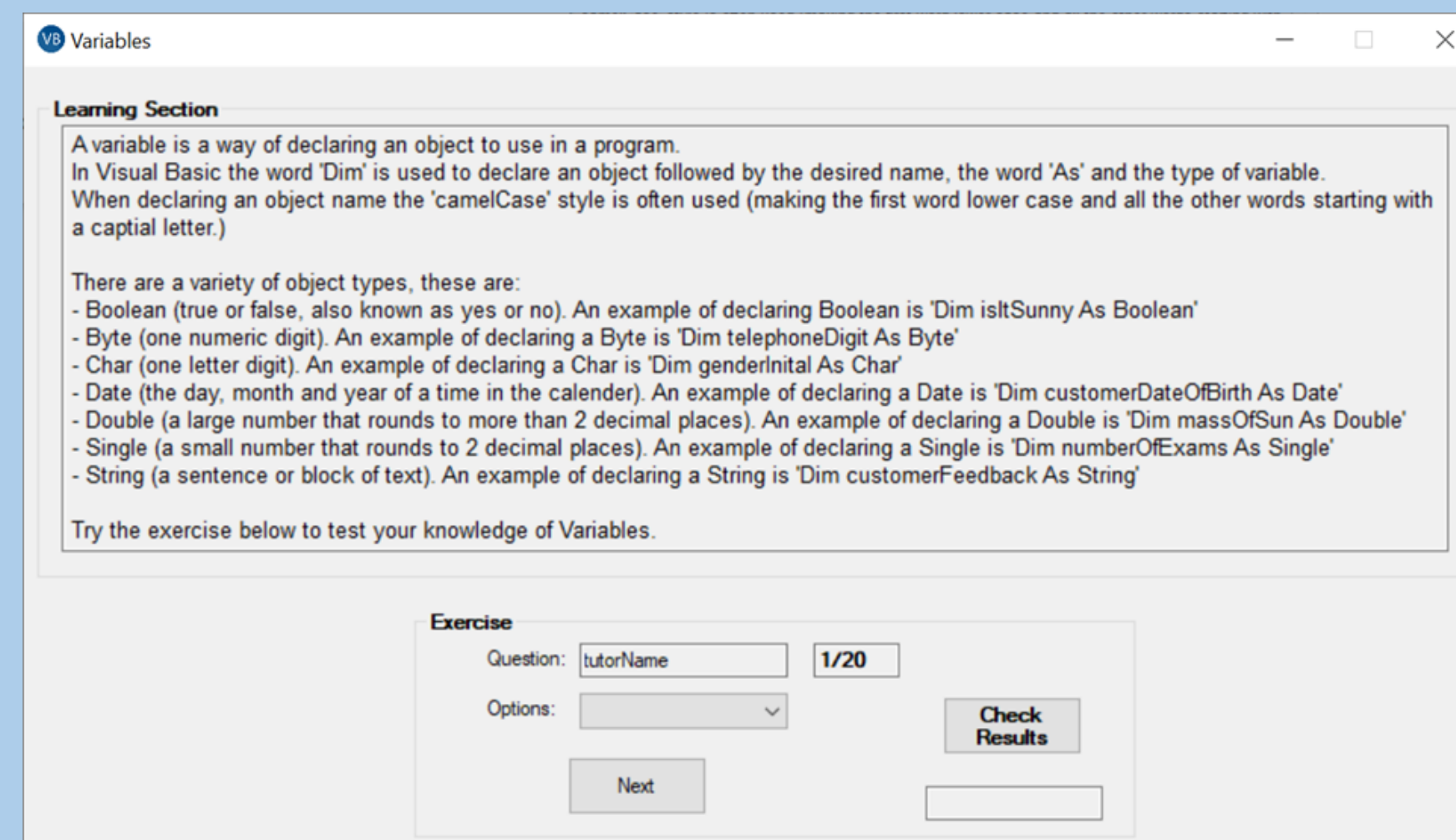
The third objective was to program the tool. The fourth objective was to test the tool. The fifth objective was to get feedback of the tool and make improvements.

3) Findings

There is currently a shortage of good programmers so there is a need to improve learning programming.

The new current computing GCSE goes into programming in more detail than the old IT GCSE. There are multiple learning and teaching styles.

The developed tool to help students learn programming was focused specifically on secondary school pupils while improving on the disadvantages of the discussed tools already out there.



4) Testing

The types of testing used were:

Unit Testing - This helped with testing individual components of the tool.

System Testing - This was used to test the whole tool.

Usability Testing - This helped measure how user friendly the tool was.

Acceptance Testing - This was used to see if a user knew what to do when using the tool.

Timeboxing - This was to test the tool at different stages of development to quickly identify bugs.

5) Conclusion

The completed literature review was used to help develop the tool.

The tool was developed with the aim and requirements met.

The tool was tested with multiple testing methods to make sure functionality was working correctly.