COMP110 WORKSHEET E: TIS-100

Ed Powley

Introduction

TIS-100 is a puzzle game released in 2015 by independent developers Zachtronics. The gameplay consists of writing assembly code for a fictional parallel computer architecture, and as such requires skills in low-level programming.

To complete this worksheet:

(a) **Play** TIS-100 — it is available to purchase from Steam for around £5;
(b) **Complete** the first thirteen levels of the game, upto and including "Signal Multiplier";
(c) **Annotate** your solutions with descriptive comments.

"The Tesselated Intelligence System is a massively parallel computer architecture comprised of non-uniformly interconnected heterogeneous nodes. The Tesselated Intelligence System is ideal for applications requiring complex data stream processing, such as automated financial trading, bulk data collection, and civilian behavioural analysis."

— TIS-100 Reference Manual

Submission instructions

Begin by **forking** the GitHub repository at the following URL:

```
https://github.com/Falmouth-Games-Academy/comp110-worksheet-E
```
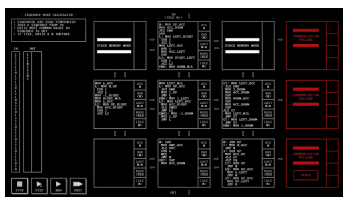
Once each level has been completed, you must add **comments** to explain your solution. TIS-100 does not give you sufficient space to do this effectively. Instead, click the "Open Save Directory" button within TIS-100 and locate the text file containing your solution. It will be named according to the "Segment" number in the level select screen, for example your solution to "Self-Test Diagnostic" will be saved as `00150.0.txt`. Open the text file in your preferred text editor. Add comments to your code, prefixing your comments with the # character.

Warning: after adding comments, if you load your solution into TIS-100 you will see the text is truncated. If you then edit the solution in TIS-100, the truncated text will be lost! Therefore it is recommended that you do not edit your solutions after annotating them, and that you make regular backups of your work.

Upload your annotated solutions to your forked repository on GitHub. Attend the timetabled worksheet review session in **Week 13**, ensuring that you have uploaded all material to GitHub before this time.

Marking criteria

TIS-100 is a puzzle game in which players must write assembly code to process data streams in increasingly complex ways.

Remember that **it is better to submit incomplete work than to submit nothing at all**. If you do not manage to finish all assigned levels by the deadline, upload solutions for whatever levels you have completed and you will receive a passing grade.

Your work will be assessed on the **number of levels** you have completed from the first thirteen. All thirteen levels must be solved to demonstrate **professional competency**, however partial credit will be awarded if some levels have been

skipped.

Your work will equally be assessed on the **quality of your comments**. Your comments should be clear, comprehensive and demonstrate a good standard of written English. Remember that comments should ideally focus on **why** rather than **what** or **how**, but use your judgement as to what is already evident from the code and what warrants explanation in comments.