

COMP1101 Programming (Black) Summative Assessment 2

Term 2 Programming Exercise Outline

- Submission by 14:00 28 April 2022
- Return by 26 May 2022
- Contributes 50% of module marks

Subject-specific Knowledge

- A knowledge and understanding of good programming practice (for example, reuse, documentation and style)

Subject-Specific Skills

- an ability to apply reuse by exploiting predefined components
- an ability to use software tools related to programming (programming environments, code management, documentation tools, etc.)
- an ability to apply software development tools and skills in real-world scenarios e.g. open-source projects, hackathons, competitions

Key Skills

- an ability to communicate technical information
- an ability to plan and work independently

Task summary

- Choose a skill to develop
- Choose a collaborative project to contribute to e.g.
 - Open-Source Software
 - hackathon
 - (collaborative) competition
- Record your progress in git with a reflective learning log
- Write a guide for other learners

Skills to develop

- These are examples only
- JavaScript or non-JavaScript

JavaScript Skills

- TypeScript
- React or Vue
- Progressive Web Apps
- d3 with SVG
- p5 and openprocessing
- WebGL / WebAudio / Other APIs
- node-RED
- Something else from State of JS

Non-JavaScript Skills

- Django
- Continuous Integration (CI/CD)
- Cloud platforms (AWS / Azure / Google / OpenShift / IBM)
- Rust

Collaborative project ideas

Contribute to Open Source Software

- Choose your favourite project
- Or pick from a list of things up for grabs for first timers
- Or code for social good
- Make sure the project is
 - active (frequent and recent commits, not many open PRs)
 - collaborative (multiple contributors)

Don't need to commit code

For example

- Review/ translate docs and help
- Issue gardening (remove duplicates)

- Answer questions on forums e.g. StackOverflow
- Make a video of installation process

Take part in a hackathon

<https://hack.athon.uk/>

Or do your own thing

- Start a new project
- As long as it is collaborative

Learning log

- Make at least four separate entries reasonably spaced over a period of at least six weeks
- The entries can either be separate files or different sections within the same file.
- They should be written using Markdown and stored in a private repository on GitHub.
- You need to commit and push each entry as you make it so that the dates of the entries are correctly recorded in git.
- You can include images and external links.

For each entry identify

- What you have done (to learn your skill and contribute to your project)
- What you have learned
- Any changes to your goals (or what your initial goals are for the first entry)
- Next step(s) to achieve your goals

The learning log should have a maximum total word count of 1500 words, as measured by the Microsoft VS Code Word Count plugin and have a reasonable balance between the entries.

Assessment criteria (10% each)

- Number, timing and word count of entries (use of git)
- Appropriate development and monitoring of goals
- Evidence of increased understanding
- Evidence of collaboration
- Evidence of criticality about your own actions and assumptions

Guide for learners

Based on your experience, write a Markdown document which explains to somebody else how to master the skill you have been learning

Guide for learners structure

- Motivation (10%): Why learn it?
- Background (10%): What do you need to know before starting? Include links to material to catch up. Make it clear who your target audience is
- Learning materials (10%): Provide appropriate links to external resources with commentary
- Evaluation (10%): How useful is the skill, compared with the effort of learning it? What similar alternatives are there?

A presentation mark (10%) will be awarded on the basis of

- formatting in (GitHub flavored) Markdown
- choice of media (images, video)
- clear writing style appropriate for audience

The guide for learners should have a maximum total word count of 1500 words, as measured by the Microsoft VS Code Word Count plugin

Submission

- Your learning log and your guide for learners should be held within a single private repository on GitHub.
- In the repository you should include a README file including a link to the repository on GitHub.
- You should submit the entire content of the repository as a zip file.

Submission repository

- The repository on GitHub must be accessible by me (username stevenaeola).
- Allow access to the repository through Settings - Manage Access - Invite a collaborator.
- If you do not allow access you will lose marks.
- Note that this does not affect the access to any code you may write, which would most likely be in a public repository.