University of the West of England
BRISTOL

MODULAR PROGRAMME

COURSEWORK ASSESSMENT SPECIFICATION

Module Details

Module Code	Run	Module Title
UFCF93-30-1	May2021 CW2	COMPUTER AND NETWORK SYSTEMS
Module Leader Mohamed Naiz	**Module Coordinator**	**Module Tutors** Mohamed Naiz
Component and Element Number A Test 2		**Weighting: (% of the Module's assessment)** 22.5%
Element Description		**Total Assignment time** 24 hours

Dates

Date Issued to Students	Date to be Returned to Students
Submission Place **REPORT TO** **MOODLE**	**Submission Date**
	Submission Time **before 11:59 PM**

Deliverables

> As listed on the Assignment specification sheet

Module Leader Signature

UFCF93-30-1 CNS: Course Work Specification, Jan2021

There are two parts to this assignment
1) a written report
2) complete a program that can engage in a game of battleships with their fellow students, students are required to complete this program in C. This program communicates with a server program that will be provided.

Report

Write a report that gives an example of sustainability in the IT industry or how IT can be used to make other industries or life in general more sustainable. The report should be no longer than two sides of A4. UWE Harvard referencing must be used.

Complete writing battleship bot

There is a battleship bot on Blackboard that needs to be completed. The incomplete battleship bot project has been zipped up and placed in the Assignment 2 subdirectory in the Assignments section of the UFCF93-30-1 module on Blackboard. The basic program is there but code must be added to give your battleship superior tactics to that of the battleships of fellow students. This is a **zero sum game**. If you do not know what a zero sum game is then you should find out as soon as possible.

A battleship server program that can be used to provide feedback on your program prior to submission is provided (Assignment 2 subdirectory). However a single battleship playing against a computer will give a very poor idea of how your battleship bot performs. To find out how your battleship bot performs you **MUST** attend the practical sessions with your fellow students. In the practical sessions your battleship bot can play and be ranked against those of your fellow students. It is how your battleship bot performs against those of your fellow students that is important.

There are server controlled battleships, these use different tactics and may be used to indicate what marks you may obtain. It is important to remember that your ranking in a game with twenty other students will be very different to that if you are playing alone. Therefore it is important that you regularly test your battleship bot against those of your fellow students.

You gain points by firing at and hitting other battleships. You lose points by being hit. You must continuously improve the tactics of your battleship bot. You are now in competition with your fellow students. Your assignment mark will be determined by the ranking that your battleship bot achieves when playing against those of your fellow students.

Extra marks may be allocated to a student at the module leader's discretion if that student comes up with a disruptive solution to the battleships problem.

There are very few rules in this game!

Deliverables

The report and entire project is to be placed into a .zip file and uploaded to Blackboard.

Marking Scheme

a) **Report**

This report should detail a sustainability issue related to the IT industry. It can be how IT can be used in other industries to improve sustainability. It can follow on from work done during the

induction week at UWE. Correct research and citations are to be used. Marks will be given for the student demonstrating an understanding of the subject and using correct citation and referencing. Marks will be given for:

- Understanding the subject
- References (must be peer reviewed journals)
- Citations
- Grammar and spelling
- Structure (sensible headings and sub-headings)
- Correct terminology
- 3rd Person
- Flows nicely

Allocation of marks: **0 to 25 marks**

b) Source Code in C

- Comments focused on the problem not the instructions
- Comments not over long making them un-maintainable
- Program banner : author name & date, revision date, functional description, user advice
- Function banner comments, functional description, parameter list, warnings
- Clear code structure expressing three tasks with operational sequences (possibly using finite state implementation through SWITCH/CASE or table)
- Functions use parameters effectively
- Duplicate code minimised

Allocation of marks: **0 to 15 marks**

c) Program Testing

You are marked on the effectiveness of the tactics that you have written into your battleship bot. Every time that your battleship fires at and hits another battleship it gains a point and the other battleship loses one. The accuracy of your battleship is affected by its health and the distance away of the target battleship.

The battleship server will rank the battleship bots in order of how well they play the game (i.e. the number of points that they score). The marks you earn will be automatically determined by your ranking.

Practical sessions have been put aside so that your battleship bots can be ranked against those of your fellow students. If you fail to run your battleship bot for the duration of these practical sessions then you will receive zero marks.

Allocation of marks: **0 to 60 marks**