FACULTY OF COMPUTING AND INFORMATICS

TCP1101 PROGRAMMING FUNDAMENTALS

TRIMESTER 2 2018/2019

Assignment#2
Report

Lecture Section: TC 01
Tutorial Section: TT 02

INSTRUCTOR'S NAME:
- **Mr Lee Kian Chin**
- **Dr Ng Kok Why**

Student ID	Name	Email Address	Phone No.
1181302192	Aiman Hans Bin Husin	aimanhans@protonmail.com	+6012-3701543

Assignment#2 Mark Sheet

TCP1101 Programming Fundamentals
Trimester 2, Session 2018/2019

To be filled by Examiner. This is for your reference only.

	Max	Actual Marks
1. Report (10%)		
a. Formatting and Style	2	
b. Language (Spelling, Grammar)	2	
c. Presentation Clarity	2	
b. Screenshots	2	
e. User Guide / Instructions to Use the Program	2	
2. Coding (50%)		
a. Error Checking Features	10	
b. Good Coding Style (indentation, spacing, identifier naming etc.)	10	
c. Code Modularity (usage of functions)	15	
d. Code Efficiency and Strategy	15	
3. Program Execution (30%)		
(If the program cannot be run, even if it can be compiled, 0 mark will be given for this section)		
a. General Appearance of Program (display)	6	
b. Accuracy (program works and runs correctly)	6	
c. Usability (interaction with user, user-friendliness)	6	
d. Performs All Required Features	6	
e. Error-free During Runtime	6	
4. Additional Features (10%)		

a. Additional special features or any other significant contributions	10	
TOTAL	100	

Introduction

Mars rover is a motor device that able to navigate through Mars. It can also perform many other things such as send an image, investigate, or gain the property of a specimen in Mars. The purpose of this program is to simulate the basic movement of a Mars rover by entering commands.

The main goal of the simulation is to collect every gold placed inside the map using the Mars rover. The user needs to input commands to control the Mars rover while making sure the rover does not move into a hole, or the mission will fail. To add into the difficulty, the user only given limited visibility to three boxes in front of the rover, which then makes it permanent once discovered.

User Manual

When first starting the program, you will be prompted with a welcome message and background story of the Mars rover. Then, you will be allowed to design the map by making the size based on inputted row and column, and the amount of gold you wanted. After that, you are shown the map to navigate the rover to the end goal.

Move forward:

1. Input M.
2. Rover will move by 1 block it is facing.

Turn right:

1. Input R.
2. Rover will change the direction it is facing by 90 ° clockwise on the same block.

Turn left:

1. Input L.
2. Rover will change the direction it is facing by 90° counterclockwise on the same block.

Quit simulation:

1. Input Q.
2. Current simulation will stop and you will be prompted with options.

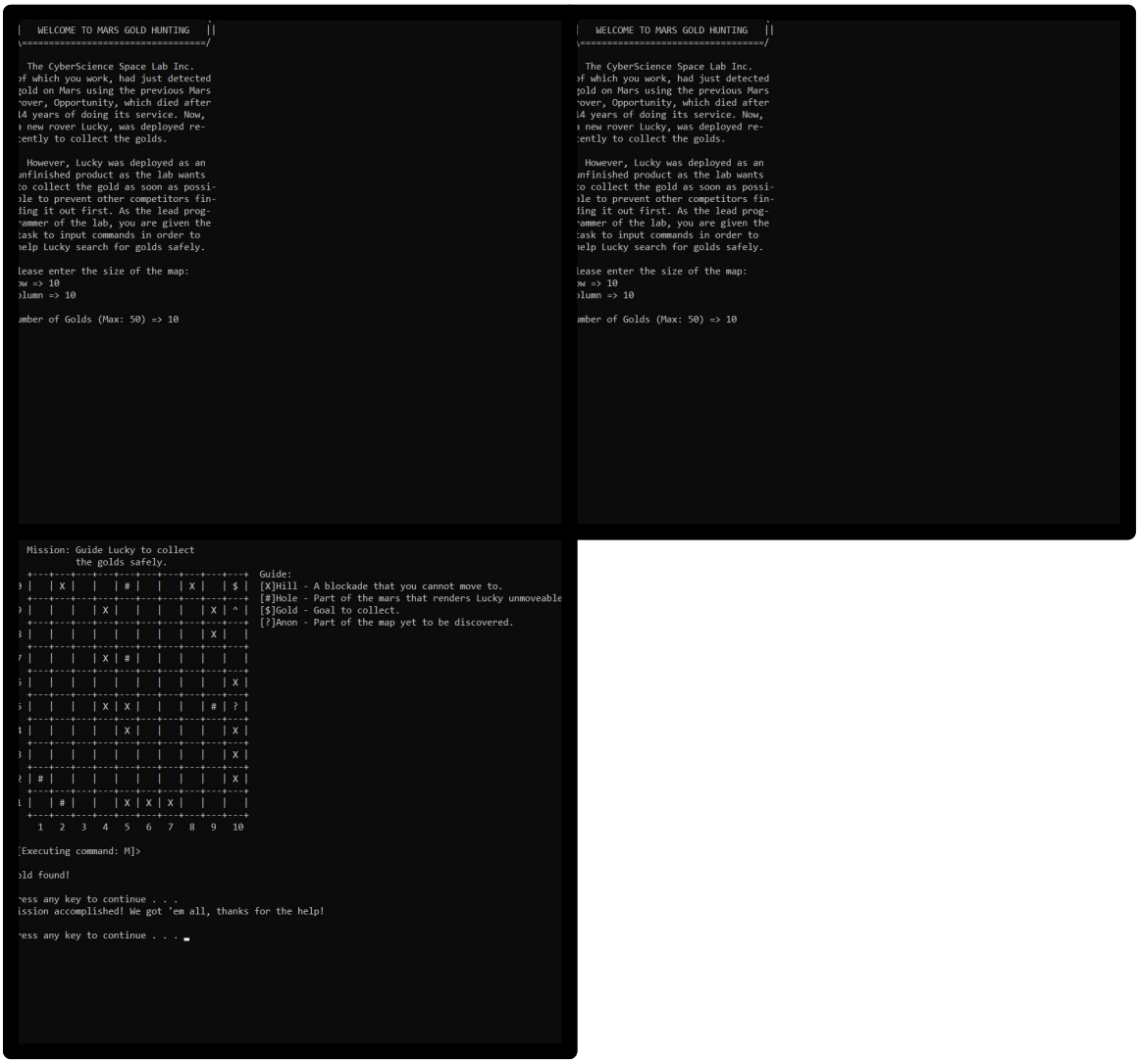
Retry:

1. Input Q.
2. Current simulation will be stopped.
3. Input Y.
4. The program will restart.

Exit:

1. Input Q.
2. Current simulation will be stopped.
3. Input N.
4. The program will end.

Screenshots


WELCOME TO MARS GOLD HUNTING
The CyberScience Space Lab Inc.
However, Lucky was deployed as an
Please enter the size of the map:
Number of Golds (Max: 50) => 10
Mission: Guide Lucky to collect
the golds safely.
Guide:
[X]Hill - A blockade that you cannot move to.
[#]Hole - Part of the mars that renders Lucky unmoveable
[$]Gold - Goal to collect.
[?]Anon - Part of the map yet to be discovered.
[Executing command: M]>
Press any key to continue . . .
Mission accomplished! We got 'em all, thanks for the help!
Press any key to continue . . .

Assignment#02 Submission Declaration

TCP1101 Programming Fundamentals
Trimester 2, Session 2018/2019

To be Filled by Each Student

Name	Aiman Hans Bin Husin		
ID	1181302192		
Lecture Section	TC01	**Tutorial Section**	TT02
Names and IDs of students which I have discussed regarding this assignment			
Number of hours I spent in doing this assignment	12 hours		

I hereby declare that this assignment represents the work done by myself. I declare that no part of my work has been copied from other persons or by means of professional assistance.

I hereby declare, and I fully understood that, if I have copied any parts from any other persons OR if any other persons have copied from my work, I will get a mark of ZERO and I am fully responsible to ensure this does not happen.

I also hereby declare that every works or materials/codes that I may have borrowed, copied or modified from other sources are properly acknowledged in the report and the sources are listed in the ACKNOWLEGEMENT or REFERENCES section. I will take full responsibility and understood that I will get a mark of ZERO if I failed to make proper acknowledgement.

I certify that any files submitted with this assignment have been virus-checked and is free from viruses.

17.02.19

Signature: …….....…… Date: ....

Note: No work shall be accepted unless it is accompanied by this submission declaration with all sections completed and it has been signed and dated. Please scan the document and include this to the softcopy of your report.