Charles Darwin University

Final Examination

Family Name	
Given Name/s	
Student Number	
Teaching Period	Semester 2, 2018

	DURATION
HIT137 – Software Now	Reading Time: **10** minutes
	Writing Time: **180** minutes

INSTRUCTIONS TO CANDIDATES

This question paper contains only one section and you must answer all questions.

EXAM CONDITIONS

__You may begin writing from the commencement of the examination session.__ The reading time indicated above is provided as a guide only.

This is a RESTRICTED OPEN BOOK examination

No calculators are permitted

One A4 sheet of handwritten single-sided notes permitted

No dictionaries are permitted

ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED
No additional printed material is permitted	1 x 16 Page Book

THIS EXAMINATION IS PRINTED DOUBLE-SIDED.

THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK.

Section A

Answer all questions.

Total No of Marks for this Section: 100

This section should be answered on the Answer Sheet provided. Please ensure that your name and student number have been written on the Answer sheet and placed in the completed Answer Booklet.

Marks for each question are indicated. Suggested time allocation for Section A: 180 mins

Question 1

Write a python program that finds all numbers divisible by 7 but not multiple of 5. The range of number for searching is between 2000 and 3200 (both included). Output should be printed in a comma-separated sequence on a single line

(05 Marks)

Question 2

Write a python program that can compute the factorial of a given 2 numbers from the user. The results should be printed in a comma-separated sequence on a single line.
Input number 1: 3
Input number 2: 4
Sample Output: 6,24

(05 Marks)

Question 3

Define a python class which has at least two methods:

getString: to get a string from console input.

printString: to print the string in upper case.

You should also include functions to invoke the above-mentioned methods.

(10 Marks)

Question 4

Write a program that accepts a comma separated sequence of words as input and print the words in a comma-separated sequence after sorting them alphabetically.

Sample input: without,hello,bag,world

Sample output: bag,hello,without,world

(10 Marks)

Question 5

Write a python program that accepts a sentence and calculate the number of letters and digits in the sentence.

(10 Marks)

Question 6

Define a function that receives two integer numbers in string form and compute their sum and print it in the console.

(10 Marks)

Question 7

Write a python program that reads from a text file and print all the unique words of the file in alphabetical order.

(10 Marks)

Question 8

Write a simple banking program using python that has four options: 1. View balance 2. Make a deposit 3. Make a withdrawal 4. Quit. You must implement classes and object for this program.

(10 Marks)

Question 9

Write a program that keep track of when our friend's birthdays are, and be able to find that information based on their name. Create a dictionary of names and birthdays. When you run your program it should ask the user to enter a name, and return the birthday of that person back to them. The interaction should look something like this:

Welcome to the birthday dictionary. We know the birthdays of:
Albert Einstein
Benjamin Franklin
Ada Lovelace
Who's birthday do you want to look up?
User Input : Benjamin Franklin #Example
Benjamin Franklin's birthday is 01/17/1706   #This your program should print

(10 Marks)

Question 10

Given an array of data:

array1

10	5	15	2	7	21

Write the code for the selection sort to sort the data and draw a table showing how the data is sorted using selection sort.

Write the code for Binary search algorithm to find the value 15 from the sorted array. Draw the tree diagram showing the binary search of the list.

(20 Marks)