Charles Darwin University

Final Examination

Family Name						
Given Name/s						
Student Number						
Teaching Period	Summer Semester, 2020					

HIT137 – Software Now	DURATION	
	Reading Time:	20 minutes
	Writing Time:	120 minutes
	Scanning and uploading:	20 minutes

INSTRUCTIONS TO CANDIDATES

Notes: (example)

1. Read all questions carefully.
2. Answer all questions.
3. Total marks available on this test are 50.
4. Questions are (not) of equal value.
5. Open book exam.
6. Use the same template file you used in Assignment 1 to write your answers.

BACKUP OPTION:

1. Go to Ubuntu Pastebin (https://pastebin.ubuntu.com/)
2. Create title as your name and student number
3. Paste your whole code there
4. Copy the link and send in your lecturers' email.

EXAM CONDITIONS

You may begin writing from the commencement of the examination session. The reading time indicated above is provided as a guide only. Please make sure that you submit your work on time.

This is an OPEN BOOK examination

Question 1

```
Assume Str is a String.

Create your own string (Str), where "length" of the string should be 18.

(The string should be in the form of Str = "ui683ji095ytrd79687df675")

Write a program to print the substring of numbers (n). After printing the subst
ring (n), "sort" them in descending order (d). Then subtract (d-s).

Example:
If Str = qwe598jhk90
substring (n)= 59890
descending order (d)=99850
subtract (d-n)=99850-59890=39960

("Note: You have to create your own method to sort the substring.
```

(Marks: 10)

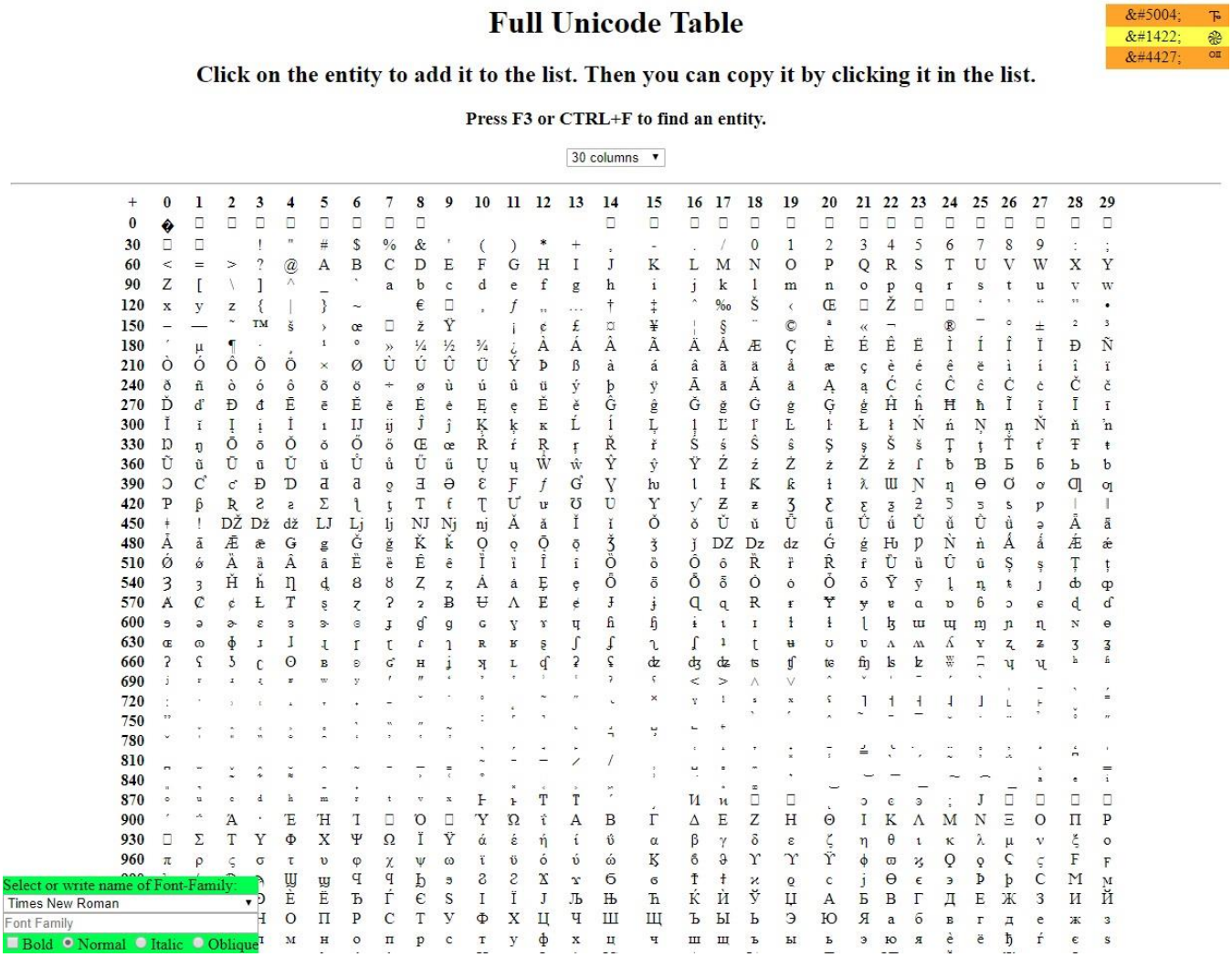
Question 2

```
Encrypted Message = »äßÓÚÙ
Decrypted Message = Python
(Use "Unicode Table" from "https://cdn.img.onl/thomasorlita.cz/projects/unicode
-table.jpg")or given below.



Write a program to showcase the "formula" used for encryption and decryption.

("Note 2: The program should have continuos flow (i.e., Calculate Average-Encry
pt-Decrypt)"")
```



(Marks: 10)

Question 3

Write your initials (First characters of your Name) using turtle graphics. For example:

Name: Yuba Raj Panta

Initials: YP

(Only two letters are fine)

(Marks: 7)

Question 4

```
Write a program to create an empty "new file.txt" and store it on the same fold
er as your python file.
Ask the user to input the "name of file".
Ask the user to input some content into the file and "print the input after wri
ting in the file". (Content should only have Upper Case letters)

Finally, replace the content in the file with "unused alphabets (A-Z)" and writ
e into the file.

Example: If content in the file is "HELLO".
    Replace it with "ABCDFGIJKMNPQRSTUVWXYZ"
```

(Marks: 10)

Question 5

```
Using Object Oriented Programming create a program that consists of 'Band', 'Al
bum', 'Song', 'Genre'. You can create '4 separate classes' (or 'subclasses'). P
rogram should follow the questions (a, b, c, d) below. Create at least 3 entrie
s

a. Ask user to input a 'Song'. The output should be 'Band', 'Album' and 'Genre'
.

b. Create a method, so that a new song can be added to the 'Album'. (Hint: Use
List[]).
c. Add a new 'Song' to the 'Album'.
d. Ask user to input a 'Album'. The output should be the updated 'Album'.
```

(Marks: 13)