Question 1: (50%)

Background:

After World War II and the advent of computers, cryptology has become increasingly complex and its applications are more widespread. Thus, we can use computers to decipher any data in binary representation, and no longer in written text. Now you receive a mysterious number that wants to tell you something. Please decipher this mysterious number by developing a decryption system using Javascript, and HTML.

Steps & Example:

- Read the input number N: input = 265
 (20%)
- 2. The decimal representation of N called X1, X1 = 265 (decimal)
- 3. Convert the decimal representation X1 into its binary representation X1 = 100001001 (binary)
- 4. Compute b1 which is the number of **1** in the binary representation X1. In this case, b1 = 3. (20%)
- 5. The decimal representation of N called X2, X2 = 265 (hexadecimal)
- 6. Convert the hexadecimal representation X2 into its binary representation X2 = 1001100101
- 7. Compute b2 which is the number of $\mathbf{1}$ in the binary representation X2. In this case, b2 = 5.

Decipher:

(10%)

If b1>b2, print "Time isn't the problem, it's getting out alive that's the problem"; If b1<b2, print "I told you, you have to start looking differently at the world"; If b1=b2, print "What's happened has happened";

Hint:

niiit.
Input (html) \rightarrow Logical calculation (javascript) \rightarrow Output (html)
Password: 265 submit
Decipher: I told you, you have to start looking differently at the world

Sample Input:

265

Sample Output:

I told you, you have to start looking differently at the world

Question 2: (50%)

Description:

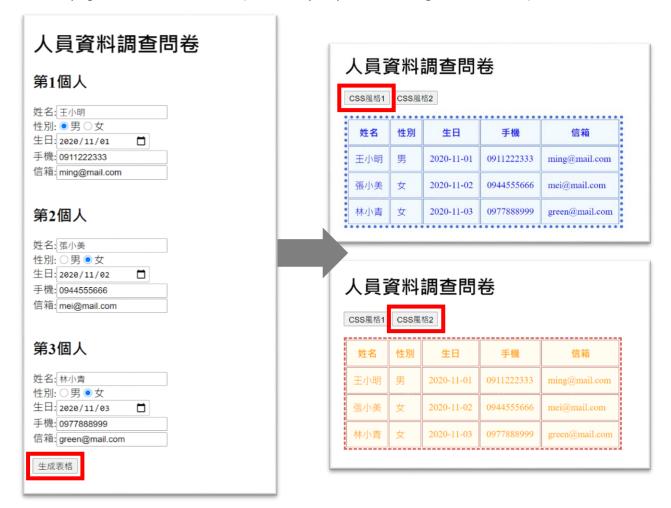
You are going to build a webpage of a questionnaire to record personal information.

There are at most 3 people's information needed to be filled.

The questions should include name, gender, birthdate, phone number and email.

After submitting the form, a table with the filled personal information should be generated. There should be 2 buttons for switching the styles of the table.

The webpage should look like this: (CSS is only required for the generated table)



Grading:

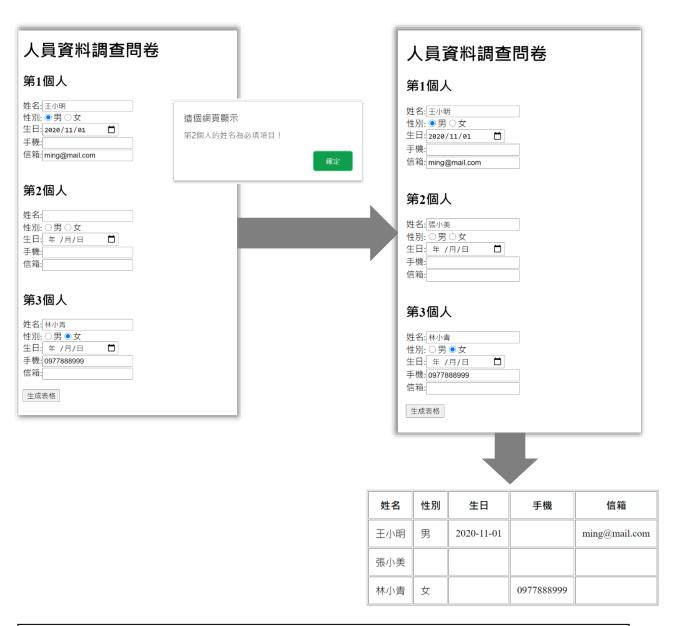
15% for form generation, 20% for table generation, 15% for style-switching function

Requirements: (minus 10 points for each unfulfilled instruction)

(a) If some parts of the form are **unfilled**, then the corresponding table cell should be **left blank**. However, the "name" of the person must be filled! If the name is unfilled, give an alert to

remind the user to as least fill the name!

(b) When switching the CSS styles of the table, you can design your own styles, but the two styles should be **totally different**! The following properties should be considered: text color, background color, border color, border width, border style.



Midterm Homework 1

- You can only use W3School and course slides in the test
 - Otherwise, you get 0 point
- Copy = 0!
- Title & file name
 - 動態網頁程式設計期中考試作業_學號_學生名.zip
- You only need to hand in the HTML files instead of the whole visual studio project
 - 學號_Q1.html
 - 學號_Q2.html
- Examination time
 - **1**3:10~16:00
 - Over examination time, your grade will be deducted by 40 points and the exam will become your homework on 23:00 on 11/11.
 - If you do not sign in during examination, your grade will be deducted by 40 points