

THE HONG KONG POLYTECHNIC UNIVERSITY  
HONG KONG COMMUNITY COLLEGE

<b>Subject Title</b>	: Introduction to Internet Technology	<b>Subject Code</b>	: SEHH1016
<b>Session</b>	: Semester Two, 2020/21	<b>Examination Time</b>	: 15:30 – 17:30
<b>Date</b>	: 11 May 2021	<b>Submission Period</b>	: 15:30 – 17:45
<b>Subject Examiner(s)</b>	: Mr Siu-cheung CHAN		

This question paper has a total of **NINE** pages (including this covering page).

**Instructions to Candidates:**

- There are **TWO** sections in this paper.  
 Section A (40%) – Short Questions. Answer any **FOUR** out of FIVE questions in this section in the answer sheet provided. All questions carry 10 marks. If you answer more than four questions, only the first four attempted questions will be marked. Indicate in your answer sheets clearly which four questions you are attempting.  
 Section B (30%) – Long Question. Answer **ALL** questions in this section in the answer sheet provided. Each question carries 30 marks.
- Show all your work clearly and neatly. Marks will be deducted for untidy work.

**Important points to follow:**

- Please type your answers of this Take-home Examination in Microsoft Word.
- Please strictly follow the **Submission Instructions** posted on Moodle before submission of your answer sheet. In addition,
  - Please make sure that you have submitted the correct and entire file for the subject concerned. Useful information of PDF file generation is available at <http://it-training.cpce-polyu.edu.hk/mod/book/view.php?id=1221>.
  - Please make sure there is no missing page in your submission.
  - The file MUST include (a) full student name, (b) student number, (c) subject code, (d) subject group, (e) page number and (f) total number of pages on EVERY answer sheet.
  - A submission period of 15 minutes is allowed after the examination end time for you to upload your completed answer sheet to Moodle. This is the Submission Deadline, and your answer scripts must be uploaded to Moodle via submission link before this Submission Deadline.

3. Please make sure that each uploaded page of your answer sheet is clearly captured. Only **ONE** single file in **PDF** format with less than **50MB** will be accepted.
4. Late submission via Moodle is not allowed.
5. Only the last submission you made within the designated timeslot will be counted.
6. Declaration of Original Work:

By submitting the answer sheet of this Take-home Examination to the subject lecturer through Moodle, you hereby declare that the work in the answer sheet is completely your own work. No part of the answer sheet is taken from other people's work without giving them credit. All references have been clearly cited.

You understand that an infringement of this declaration leaves you subject to disciplinary actions such as mark deduction, disqualification or even expulsion by the College.

If necessary, students may be invited to provide more information on their submission.

## Section A (40%) – Short Questions

Answer any **FOUR** out of FIVE questions in this section in the answer sheet provided. All questions carry 10 marks. If you answer more than four questions, only the first four attempted questions will be marked. Indicate in your answer sheets clearly which four questions you are attempting.

### Question A1

Online threats are a type of network security risks that may cause adverse events or actions through the Internet. End-user vulnerabilities, web service developers / operators or web services themselves may make online threats possible. Regardless of the intent or reason, the consequences of online threats can harm individuals and organizations.

(a)

---Recommended Link---

[Did We Just Uncover The Next Telsa? Drop Everything On 5/11](#) Her success has earned her respect from the investment world. For the past 5 years, she's been picking profitable tech stocks reaching gains as high as 3,121%. Now, for the first time, Dr. Wood has agreed to reveal her Five Point Tech Profit strategy. She'll also be revealing her favorite tech stocks (including names and ticker symbols)... and what she believes is the #1 technology opportunity right now. Watch it live on Tuesday, May 11th at 3:30 p.m. EST. [Reserve a FREE spot at the event here.](#)

Figure 1

Figure 1 is a screen capture that shows part of the email message that received by Paul yesterday. Identify the most likely threat and describe how it operates in general. (5 marks)

- (b) In the story of the Trojan War, the Greeks were unable to break through the walls of Troy to conquer the city. They hid in a huge wooden horse and left the city gate. The Trojans thought it was a sacrifice of the gods and brought it inside, while Greek soldiers led by Odysseus showed up at night to destroy the city and kill its inhabitants. Like Odysseus, cyber attackers want you to be decoyed into letting malicious code enter your computer network. Computer Trojans have evolved into different complex forms, categorize any **TWO** types of them and suggest **ONE** effective way to defend against Trojans. (5 marks)

### Question A2

The B2B model focuses on providing products from one company to another. Although many businesses in this segment are service providers, under this heading you will find software companies, office furniture and supply companies, document hosting companies, and many other e-commerce business models.

- (a) Illustrate **EIGHT** typical ways that B2B e-businesses generate revenue. (4 marks)
- (b) Discuss **FOUR** common B2B web hosting options in terms of cost and reliability. (6 marks)

### Question A3

The following illustration shows a full cycle of requesting a web page with Dynamic HTML.

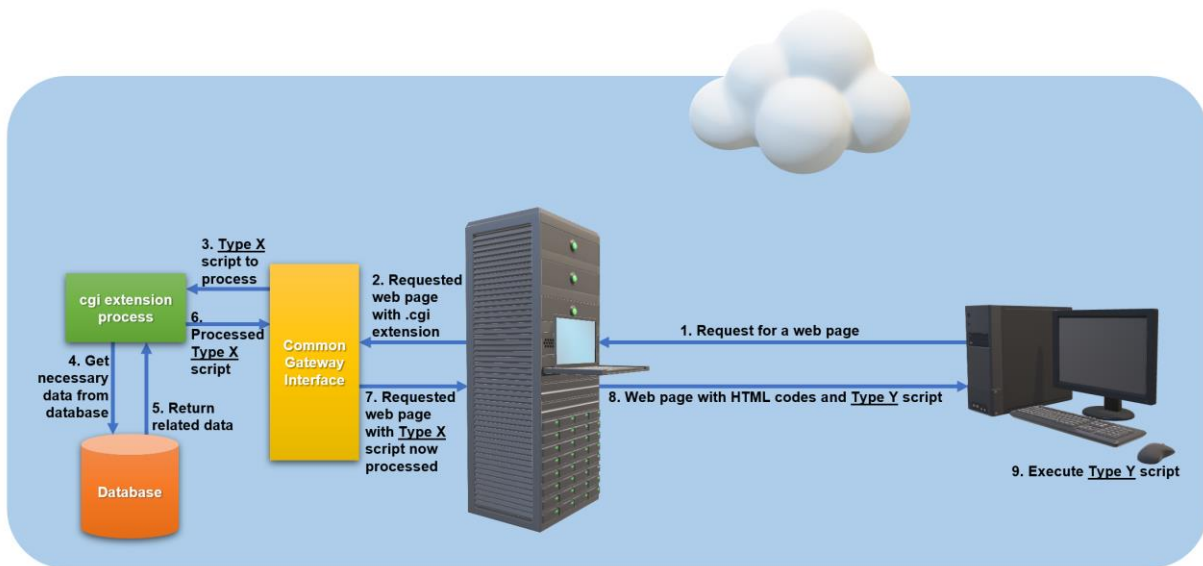


Figure 2

- There are Type X and Type Y scripting involved in Figure 1. Label them with the correct types of scripting and state any **ONE** function for each type of scripting performed. (4 marks)
- Compare the difference between two client / server database models and provide **TWO** examples for each of them, respectively. (6 marks)

### Question A4

The ongoing crisis and economic uncertainty following the COVID-19 pandemic have prompted e-commerce companies to look for new opportunities and provide customers with unique financial services. In recent years, e-commerce giants have set foot in the financial services sector, a move that may disrupt the consumer loan sector.

- Many e-commerce companies have also begun to adopt the "buy now and pay later" model to increase sales on their platforms. In addition to Amazon Pay Later and Paypal CREDIT, name any **TWO** "buy now and pay later" payment solution vendors / platforms for online retail stores with **ONE** local client / partner for each of them (provide the related URLs and screen capture when appropriated). (4 marks)
- As the world of e-commerce continues to evolve and change, it is not surprising that payment methods are included. Although merchants need to pay a certain cost (usually 2%-15% of the purchase price), many payment options are completely free for customers to use, thus creating a successful situation that can erase any doubts about spending money on a must-have or an impulse buy. Discuss any **THREE** advantages for online merchants to use payment gateways. (6 marks)

## Question A5

Figure 3 is a screen capture that shows part of The New York Times' website on 2 April 2021.

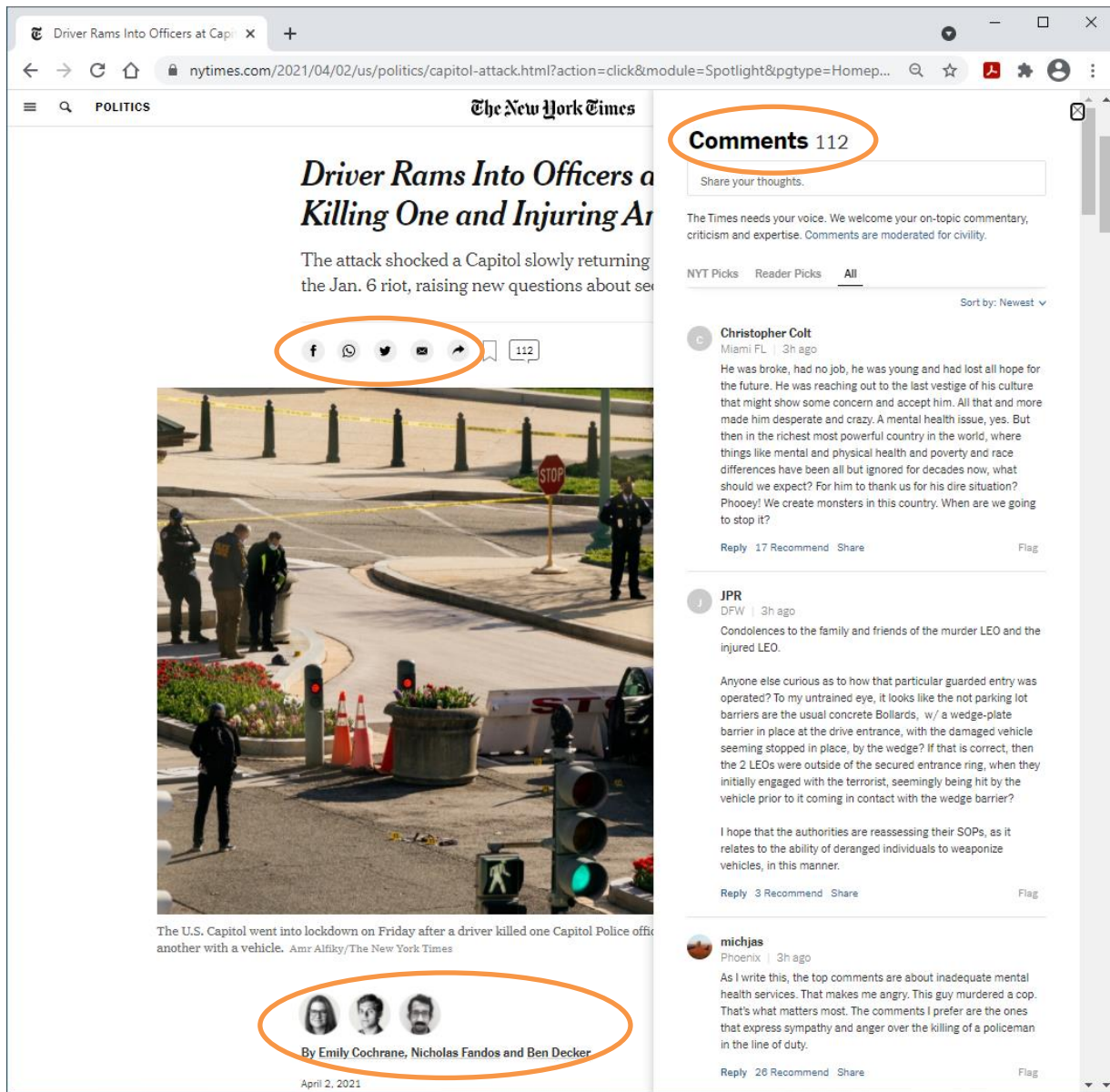


Figure 3

Source: <https://www.nytimes.com/2021/04/02/us/politics/capitol-attack.html?action=click&module=Spotlight&pgtype=Homepage...>

- (a) There are many characteristics of news-oriented websites, name and explain the **TWO** characteristics being circled which The New York Times used. (4 marks)
- (b) Identify **SIX** different parts of the source URL. (6 marks)

- End of Section A -

## Section B (30%) – Long Question

Answer **ALL** questions in this section in the answer sheet provided. Each question carries 30 marks.

### Question B1

Suppose you are the freelance web developer for Overseas Education Consultancy. An Apache web server (XAMPP) has been set up in the company. It is installed with PHP and configured that the web pages and PHP files are located at “C:\website\root”.

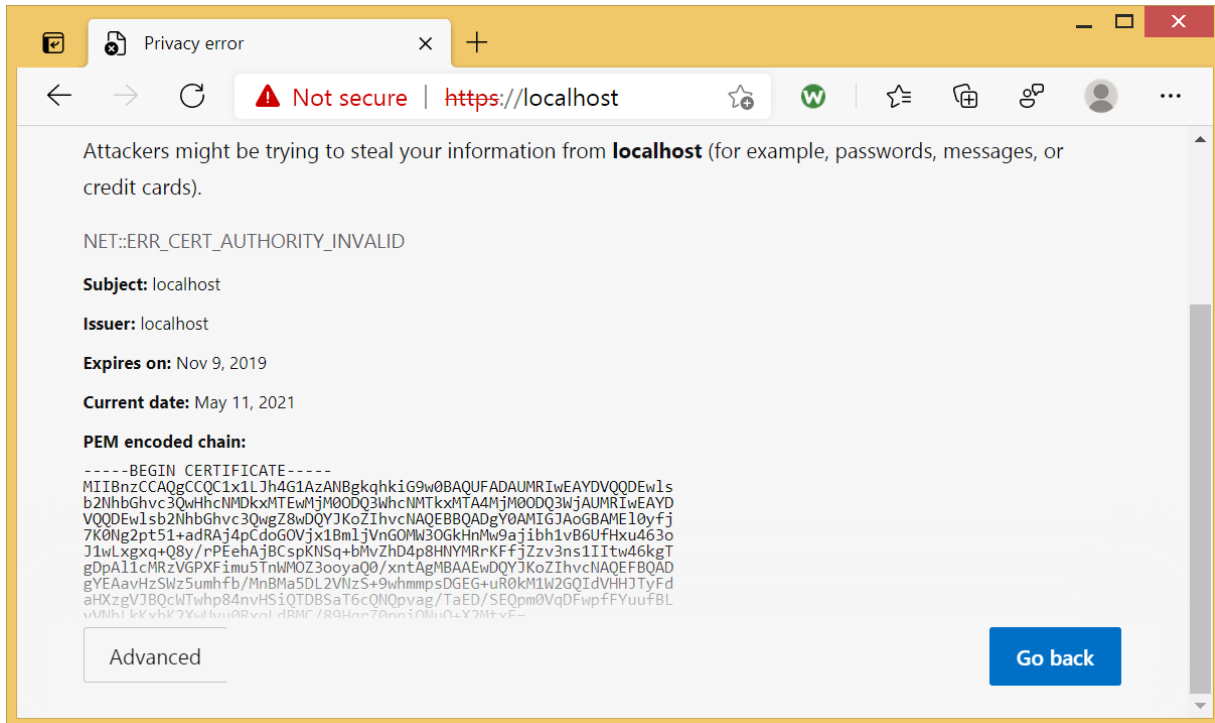


Figure 4

- In the web server machine, you open a web browser and type “https://localhost” in the address bar, you see a web page as shown in Figure 4 instead of a common homepage. Suggest **ONE** reason why this is happened. (2 marks)
- For further testing, you would like to bind Apache to the IP address of “127.0.20.21” with the specific port “1105”. Describe how you set it step-by-step. (2 marks)
- You are requested to design a HTML form as shown in Figure 5 to collect data from potential customers, details of the design are shown in Table 1. Background colour is “gold”, when the button with the label “Contact OEC” is pressed, a POST method will be used to forward the request to the file called “contact.php” in the server’s root directory. (12 marks)



## Question B1(continued)

50%                      5%                      45%

• Name  We'd love to know your name!

• Email address  We need an email we can contact you on

• Mobile number  Please enter a valid phone number

• About You  Say something about yourself

• Preferred mode of counselling

OEC will not share your details with others without your permission:

☒ I agree to OEC Terms, privacy policy and Personal Information Collection Statement (PICS)

☒ Please contact me by phone, email or SMS to assist with my enquiry

☐ I'd love to get useful information from OEC about study abroad, scholarships, English Language Training and IELTS

Figure 5

<u>Field</u>	<u>Description</u>	<u>Variable Name used in HTML</u>
Name	Mandatory single-line text field	<i>name</i>
Email address	Mandatory field for an email address	<i>email</i>
Mobile number	Field for entering a number	<i>number</i>
About You	Multi-line text input	<i>bio</i>
Preferred mode of counselling	Drop-down list of two available options (“In-person” and “Virtual Counselling”)  When the “Submit” button is pressed, the following will happen: ❖ If “In-person” is selected, then the value “1” will be assigned to the variable. ❖ If “Virtual Counselling” is selected, then the value “2” will be assigned to the variable.	<i>mode</i>
Agreement	The value “y” will be assigned to the three agreement boxes “a1”, “a2” and “a3”, respectively. The first two boxes are ticked when the web page appears.	<i>a1, a2, a3</i>

Table 1

- (d) Assume that the “name” and “email” are input correctly, use “if” and “if...else” structure to write the codes of “contact.php” to handle the data from the HTML form and display the related page based on the user’s input (depends on user has input the “Mobile number” or not and selected “In-person” or “Virtual Counselling”). Figure 6 and Figure 7 are two sample output captures for your quick reference. (9 marks)

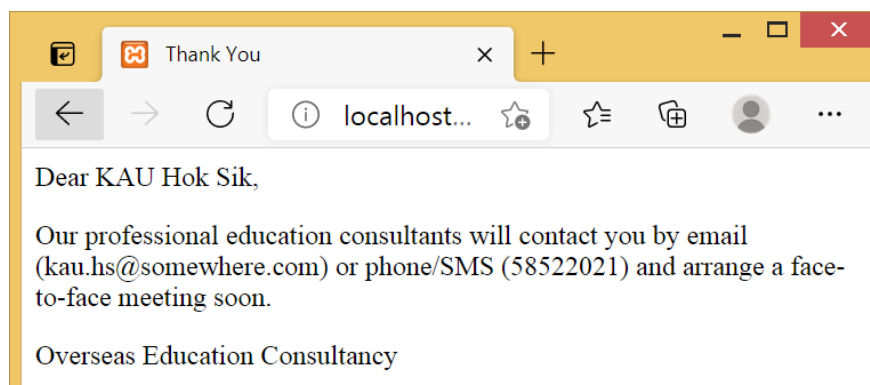


Figure 6 Provided “Mobile number” and selected “In-person”

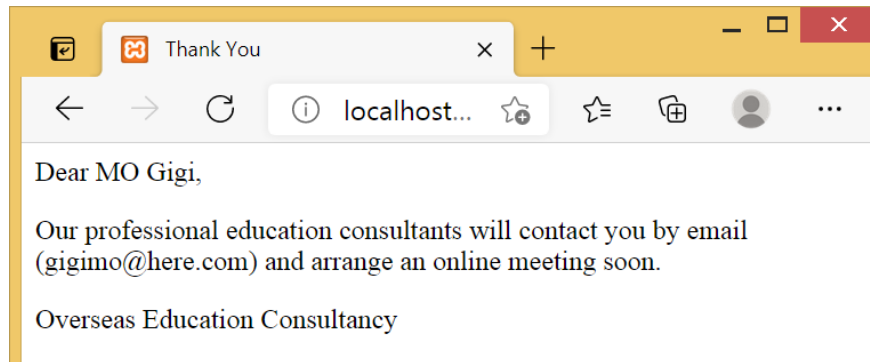
Question B1(continued)

Figure 7 Not provided “Mobile number” and selected “Virtual Counselling”

- (e) Finally, an image and CSS are included to make the HTML form more attractive.

Figure 8 is the CSS part for handling the image mouseover effect.

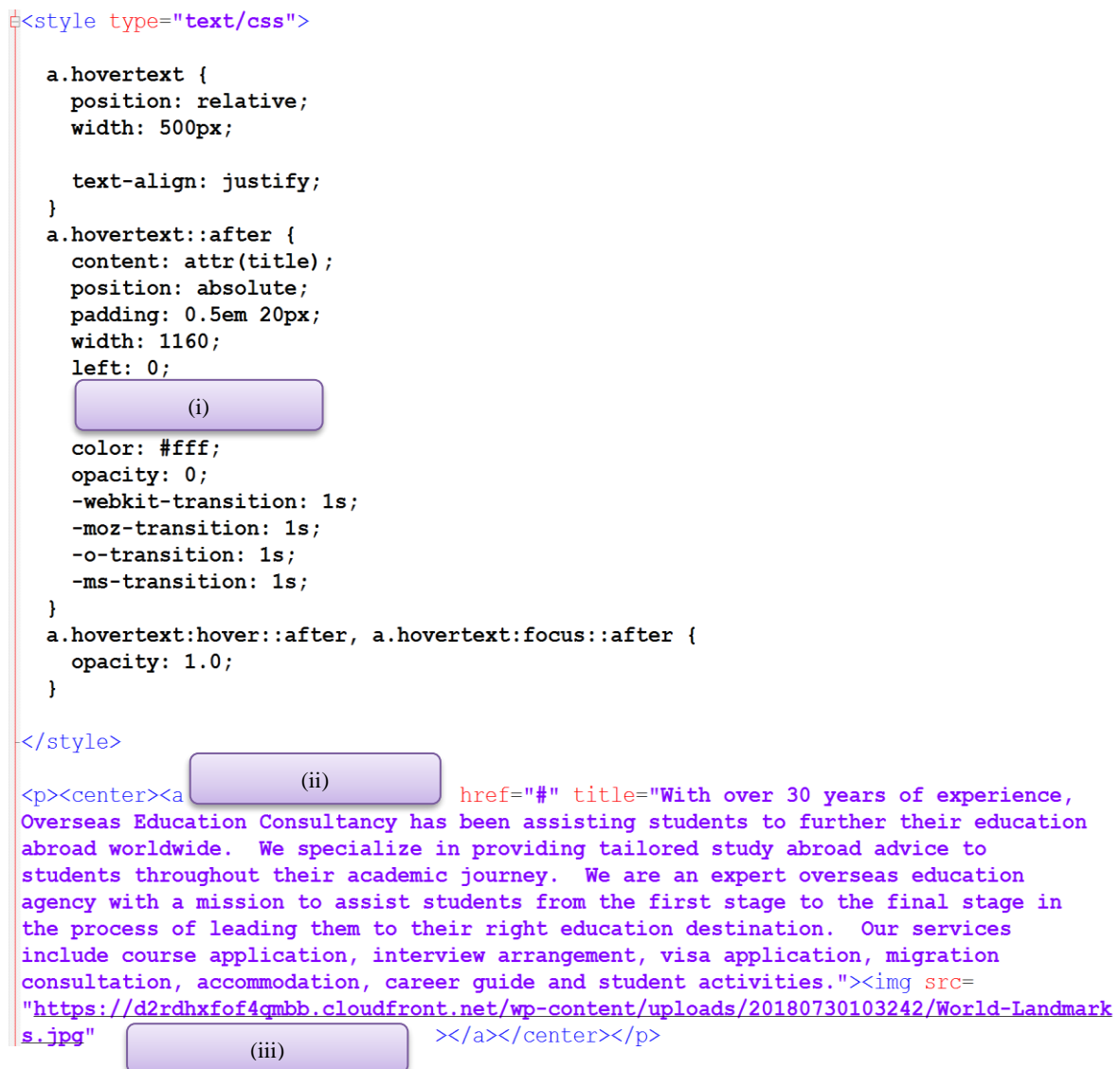


Figure 8

Complete the missing codes in (i), (ii) and (iii) with reference to Figure 9.

(3 marks)



Question B1(continued)

- (f) Another “sehh-form.css” file is available in the same directory, write the necessary codes to include it in the HTML file to have the final appearance as shown in Figure 9. (2 marks)

Overseas Education Consultancy

Search Google or type a URL

1160

148

400

1200

40%

5% OEC will not share your details with others without your permission:

☐ I agree to OEC Terms, privacy policy and Personal Information Collection Statement (PICS)

☐ Please contact me by phone, email or SMS to assist with my enquiry

☐ I'd love to get useful information from OEC about study abroad, scholarships, English Language Training and IELTS

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Figure 9

- End of Section B -

- END OF PAPER -