

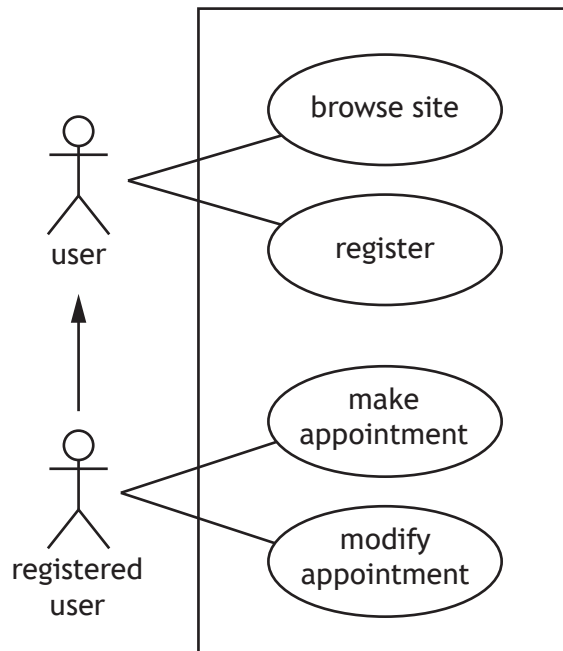
11. Hair by Harvey is a hair salon. A team of developers is creating a database-driven website to allow customers to book appointments for treatments at the salon.

(a) Part of the booking process requires a new customer to register before making an appointment. When registering, customers must provide their full name and contact telephone number.

(i) Name the type of feasibility study that is highlighted in the requirements for this part of the booking system. Justify your answer.

1

(ii) Part of the use case diagram is shown.



Describe the relationship between the actors in the diagram.

1

(b) Customers who want to modify an existing appointment must enter the `appointmentID` in a HTML form.

The code for this HTML form is shown below.

```

Line 1  <form action= "modifyAppt.php" method = "GET">
Line 2  Appointment ID: <input type="text" name="apptID" />
Line 3  <input type="submit" value="Modify Appointment">
Line 4  </form >

```

Write the PHP code for the file `modifyAppt.php` to assign the form data to suitable server-side variables.

2

## 11. (continued)

- (c) The website connects to an external database server using the following credentials.

- Username: Harvey
- Password: £dxG67\*
- Server: db.hbh.com
- Database: hairbyharvey

Write the PHP code used to establish a connection with the database server using a variable called `$conn`.

2

- (d) The database table called `Stylist` is used to store details of all stylists who work in the salon. Sample data from the `Stylist` table is shown below.

Stylist			
stylistID	sFirstName	sLastName	ratePerHour
1	Harry	McCann	14.25
2	Tina	Reid	15.00
3	Jeremy	Gerrard	14.50
...	...	...	...

A query is used to display the full name of all stylists who earn at least £14.50 per hour.

The incomplete PHP code used to execute this query and display the results is shown below.

```

Line 1  $sql = "SELECT sFirstName, sLastName FROM Stylist
        WHERE ratePerHour >= 14.50";
Line 2  // execute query and store results in $result
Line 3  $result = _____ ;
Line 4  // check query has returned at least one row of data
Line 5  if ( _____ > 0 {
Line 6      // process each row of data
...

```

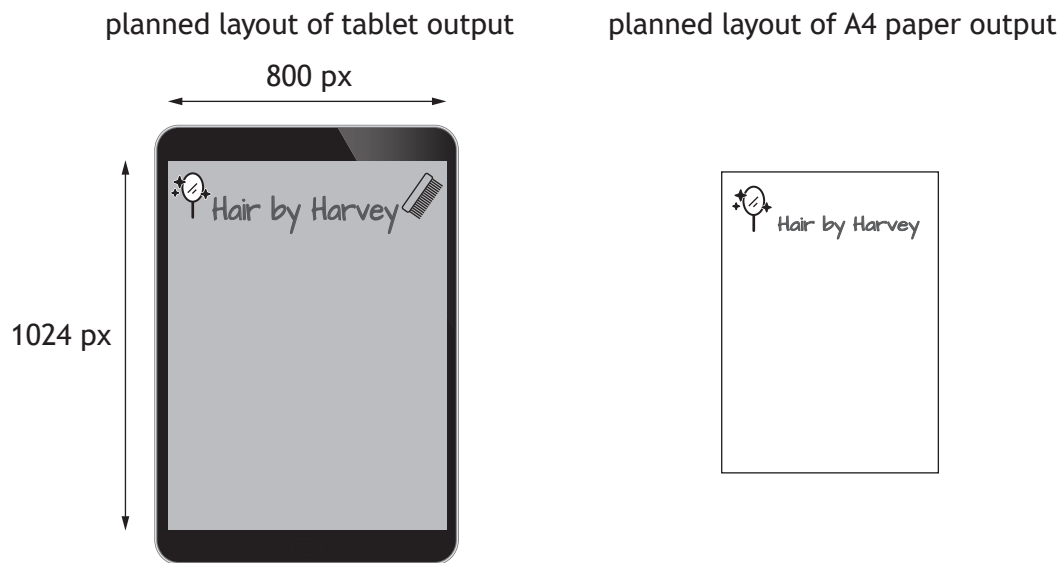
Write the PHP code needed to complete Line 3 and Line 5.

4

[Turn over

## 11. (continued)

- (e) The website will be used to output data to tablets and A4 paper. The planned layout for both forms of output media is shown below.



The CSS used to create the tablet layout is shown below.

```
@media screen and (max-width:800px) {
  body { background-color: light-grey }
  .mirrorImg { width: 200px; height: 200px }
  .combImg { width: 200px; height: 200px }
  .heading { font-family: Arabic; font-size: 32px }
}
```

Describe how the CSS could be adapted to produce the layout for paper output.

2

11. (continued)

(f) Once developed, all aspects of the website will be tested.

The test plan for the completed website includes the persona and test case described below.

Persona

Lesley is a 27-year-old who likes to make regular bookings to have her hair coloured every 12 weeks.

Test Case

Log on to the system using customer ID 4.  
  
Make a booking for a hair colouring treatment on 22<sup>nd</sup> July 2022 and a follow-up booking 12 weeks later.

Some screen shots resulting from this section of testing are shown below.

introductory screen

The introductory screen for 'Hair by Harvey' features a dark header with the brand name in a script font and 'APPOINTMENT BOOKING' in a bold sans-serif font. Below the header are two buttons: 'LOG IN' and 'REGISTER'. Under the 'LOG IN' button, text reads: 'Log in using your customer ID or your contact number.' Under the 'REGISTER' button, text reads: 'Users must register before booking any treatment. Adding payment details is optional.'

appointment date

This screen shows the 'Date of Appointment' field with a date picker set to '22 Jul 2022'. Below it are two dropdown menus: 'Stylist Available' and 'Treatment required', both with a 'Leave blank if no preference' option. At the bottom are three buttons: 'BOOK', 'CLEAR', and 'CANCEL'.

treatment

This screen is similar to the previous one but shows the 'Treatment required' dropdown menu open, displaying options: 'Trim', 'Hair Colouring', and 'Cut'. The 'BOOK' button is highlighted.

(i) Name and describe the type of testing illustrated above.

2

(ii) Explain whether the solution shown is fit for purpose.

1