



Test 1 Questions for CSC584 Enterprise Programming - Oct 2023

Enterprise Programming (UtmSPACE (School of Professional and Continuing Education))



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Name : _____ Group : _____
Student ID : _____

TEST 1 : CSC584 ENTERPRISE PROGRAMMING

Part I : Multiple Choices (20 marks)

1. What restriction is there on using the `super` reference in a constructor?
 - A. It can only be used in the parent's constructor.
 - B. Only one child class can use it.
 - C. It must be used in the last statement of the constructor.
 - D. **It must be used in the first statement of the constructor.**
2. Consider the following code:

```
public class quiz
{
    private int i;

    public quiz(int iValue)
    {
        i=iValue;
    }
}
```

Which of the following statement is **TRUE** about the class quiz?

- A. It has a default constructor.
 - B. **It has a normal constructor.**
 - C. Its parent class is Java.
 - D. It cannot be extended.
3. Given the following codes:

```
public class laptop
{
    private double price;
    public double getPrice()
    {
        return price;
    }
}
```

Which of the following is the **CORRECT** category of `getPrice()` method?

- A. Mutator
 - B. Processor
 - C. **Retriever**
 - D. Class
4. Given the superclass named Book and two subclasses named Novel and Comic. Which of the following declaration is valid?
 - I. Book b = new Book;
 - II. Book b = new Novel();
 - III. Comic c = new Book();
 - IV. Book b = new Comic();
 - A. I, II, III and IV
 - B. **I, II, IV**
 - C. II and IV
 - D. III

5. Which of the following are scripting constructs that can be used to insert Java code in JSP?

- I. directives
- II. scriptlets
- III. expressions
- IV. actions

- A. I and II
- B. I and III
- C. II and III**
- D. III and IV

6. The following code is an example of a(n) _____.

```
public static int getPrice(int age, int ID, int year)
{
    .....
}

public static int getPrice (int age, int ID)
{
    .....
}
```

- A. interfaces
- B. overriding methods
- C. overloaded methods**
- D. polymorphism

7. The request information passed from a client to the servlet is contained in an object of `HttpServletRequest`. Which of the following methods that can be used to obtain information from the request?

- I. `getParameter`
- II. `getSession`
- III. `getQuerys`
- IV. `getParameterValues`

- A. I and IV
- B. I, II and III
- C. I, II and IV**
- D. III and IV

8. The fragment code below used for

```
HttpSession httpSession = request.getSession();
httpSession.setAttribute("address", address);
```

- A. Store address object to the session
- B. Create a session object and get address object in the `HttpSession`

- C. **Create a session object and store address object to the session**
 - D. Create a session object
9. Which of the following method is used to obtain the value of the cookie?
- A. get_cookies()
 - B. get_name()
 - C. **get_value()**
 - D. get_add()
10. JSP predefined variables are also known as JSP implicit objects. Which of the following implicit object represent the ServletContext object for storing persistent data for all clients?
- A. response
 - B. request
 - C. config
 - D. **application**

Part II. Answer all questions. (30 Marks)

QUESTION 1

Given the following `Curtain` and `Dress` subclasses are inherited from `TailorShop` superclass.

Superclass : TailorShop

Attributes:

```
String custNo // customer I/C number
String custName // customer Name
String date // date of order
char Cust_type // regular customer or new customer
// regular customer will be given 15% discount
// from total charges
```

Abstract Method:

```
public abstract double calCharges() // method to calculate the
// charges
```

Subclass : Baju

Attributes:

```
String dressType // Type of dress, Kebaya or Kurung or Jubah
boolean silk; // either Yes or No to silk
```

Details of charges are shown in the table below:

Dress Type	Silk (RM)	Non-Silk (RM)
Kebaya	80	40
Kurung	50	25
Jubah	100	50

Subclass : Curtain

Attributes:

```
int windows; // total number of windows
int doors; // total number of doors
```

```
final double windowPrice = 45.00; //cost per piece
final double doorPrice = 55.00; //cost per piece
```

Abstract Method:

```
public abstract double calCharges() // method to calculate the
// charges
```

- Write abstract methods of `calCharges()` to calculate the total charges for both subclasses. (7 marks)
- Assume the following code has been defined:

```
TailorShop [ ] J = new TailorShop [25]; //consists of both subclasses' objects
```

- Write a program fragment to determine and display the number of "kebaya", "kurung" and "jubah" made by the tailor at `TailorShop`. (5 marks)
- Write a program fragment to calculate and display the total charges of all regular customer who sent their curtain to the `TailorShop`. (3 marks)

QUESTION 2

You are required to complete the given code segment.

- a) Given a Java class name booking.java with data members and methods. Complete the method definition for getPrice(). The method should calculate price based on duration and room type when the selected room type is available using the following table:

Room Type	Price Per Day (RM)
Studio	260
1 BedroomDeluxe	310
1 BedroomPremier	370
2 BedroomDeluxe	410
3 BedroomDeluxe	490

(6 marks)

```
public class booking {
    public int duration;
    public String roomType;
    public String reservationDate;
    public int quantity;

    public booking(int duration, String roomType, String reservationDate, int quantity) {
        this.duration = duration;
        this.roomType = roomType;
        this.reservationDate = reservationDate;
        this.quantity = quantity;
    }

    public int getDuration() {
        return duration;
    }

    public void setDuration(int duration) {
        this.duration = duration;
    }

    public String getRoomType() {
        return roomType;
    }

    public void setRoomType(String roomType) {
        this.roomType = roomType;
    }

    public String getReservationDate() {
        return reservationDate;
    }

    public void setReservationDate(String reservationDate) {
        this.reservationDate = reservationDate;
    }

    public int getQuantity() {
        return quantity;
    }

    public void setQuantity(int quantity) {
        this.quantity = quantity;
    }

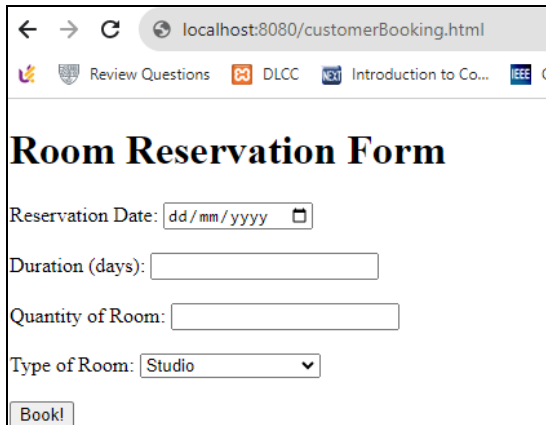
    //i) calculate getPrice //(6m)

}
```

- b) Given the code segment of customerBooking.html page for customer to choose room, reservation date and duration.

```
<h1>Room Reservation Form</h1>
<form action="ProcessBooking" method="post">
  Reservation Date: <input type="date" name="reservationDate"><br>
  Duration (days): <input type="text" name="duration"> <br> <br>
  Quantity of Room: <input type="text" name="quantity"> <br> <br>
  Type of Room: <select name="roomType">
    <option value="Studio">Studio</option>
    <option value="1 Bedroom Deluxe">1 Bedroom Deluxe</option>
    <option value="1 Bedroom Premier">1 Bedroom Premier</option>
    <option value="2 Bedroom Deluxe">2 Bedroom Deluxe</option>
    <option value="3 Bedroom Deluxe">3 Bedroom Deluxe </option>
  </select> <br> <br>
  <input type="submit" value="Book!">
</form>
```

Based on the booking.java defined in a), write a program segment for Servlet ProcessBooking that will retrieve the value input by customer and display the page as given below. The servlet page must use Java class for object creation and parameter retrieval with the combinations of Servlet scripting elements to access functions available in the class.



(9 marks)

```
protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");

    //i) retrieve input values (3m)

    //ii) create object (1m)

    //iii) display the output (5m)

}
```