

2024

COMPUTER SCIENCE — HONOURS — PRACTICAL

Paper : DSE-B-4P

(Advanced Java)

Full Marks : 30

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

Set - 2

Marks Distribution

Experiment / Source Code	: 15
Output	: 05
Sessional	: 04
Viva voce	: 06

Answer *any one* question.

1. Write a JSP/Servlet application that manages marks updation of End Semester. Supplementary examination and thus allows to update marks of a student in database if the course grade is found F else it does not allow to update the marks and also shows invalid task message to user. Here, write an HTML form that inputs following fields : univ-roll-no, session, semester, course and marks. It updates grade information in database according to the input marks. The marks range are following :

Marks	Grade
70-100	A
40-70	B
Below 40	F

2. Write a JSP/Servlet application that gives us a Digital Temperature converter which converts Celsius to Fahrenheit and vice versa on user inputs. Do necessary checking if inputs are blank or invalid using javascript/jquery before form submission.

3. Write a JSP/Servlet application that greets if a user has visited for the first time or displays the number of times visited. If the user visits more than 10 times then invalidate the session for security reasons with proper message to the user.
  
  4. Write a JSP/Servlet application that enables registered user to login to the system. On successful login, it allows the user to update the password. There must be a list of usernames with respective passwords and the date of last time password updation stored in database. Any password should be of length four and must contain digits only. Show proper message if input login fails. On successful updation of password, store new password and also the date.
  
  5. Write a JSP/Servlet application that inputs, calculates and maintains record of registered user's monthly phone bill. The inputs are monthly call usage, sms and data usage. The respective charge details are given below :
    - (a) up to first 50 minutes\_free, rest 1.20/- per minute
    - (b) up to first 50 sms\_free, rest 0.80/- per sms
    - (c) data charges : first 512 MB free, rest 1.50/- per 10MB usageShow at least 2 different bill details of a user.
  
  6. Design a Login/Registration Page using HTML/JSP. The page will consist of :
    - (a) Username (Label and Text Field)
    - (b) Password (Label and Text Field)
    - (c) New User (Checkbox)
    - (d) Submit Button.If the New user Checkbox isn't ticked, on clicking the submit button, the username and password will be checked with some static values. If both the values are correct, a message will be displayed stating that the login is successful. Otherwise display a suitable error message. If New user is clicked then user will choose username. If that username exists then system will ask for other username and the password should be at least 8 alpha-numeric value.
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