Department of Higher Education
University of Computer Studies, Yangon
Second Year (B.C.Sc. / B.C.Tech.)
Final Examination
Advanced Java Programming (CST-201)
September, 2018

Answer **ALL** questions.   Time allowed : **3** hours.

1. (a) Write a code segment to get IP address according to their host name: "www.google. com" by using " java.net" package.   (2 marks)

   (b) Write a client-server application using socket to do the following conversions according to client request: from Fahrenheit(F) to Celsius(C) or from Celsius(C) to Fahrenheit(F).
   (i) Server acts as a converter that accepts command and input, and then returns the converted value to the client. ($C=(F-32)*5/9$)
   (ii) In the client site, the user interaction is as below: (16 marks)

1.To convert C to F	1.To convert C to F
2.To convert F to C	2.To convert F to C
Choose option 1 or 2: 1	Choose option 1 or 2: 2
Enter a number: 10	Enter a number: 50
Result is: 50.0 F	Result is: 10.0 C

2. (a) What Exception Class is used to handle unexpected failure of the network or remote machine?   (2 marks)

   (b) Write an RMI application to create a guessing game in which the user guesses the random number generated from the server side. The server generates a random number between specified minimum-range and maximum-range, checks whether the guess number is equal or not and returns the status message to the client. In the client side, the sample form is as below: (16 marks).

Enter Guess Number: 3	Enter Guess Number: 1
Enter Minimum Range: 1	Enter Minimum Range: 1
Enter Maximum Range: 15	Enter Maximum Range: 15
Random Number is 3.	Random Number is 3.
You are Lucky Person!	Your guess is lost. Try Again!

3. (a) Write a code segment to add your cookie to the response object. Assume that cookie obj name is mycookie.   (2 marks)

   (b) Write a dynamic web project to create the student profile. The client side web page (Home.jsp) takes four inputs and sends them to server side web page (StuentProfileServlet.java) in Figure_1. The servlet add these inputs in an arraylist using httpsession and displays the arraylist that are shown in Figure_2. If the input email has already exited in the list, all inputs are not added into the arraylist and show message "Invalid Email" in Figure_2. (22 marks)

Student Profile

Name :	Tracy
Roll No :	2CS_11
Email :	smith@gmail.com
Phone No :	09424875498
	Submit

Figure_1

Stuent Profile

Invalid Email

Name	Roll No	Email	Phone
Thida	2CS_5	thida@gmail.com	09423876513
Smith	2CS_9	smith@gmail.com	09424875498

Figure_2

4. (a) What two attributes are used in <jsp:useBean>? (2 marks)

(b) Write a java server page to create the following online quiz system. If the user answers "True", it displays "Answer is correct!" message and otherwise, it displays "Answer is incorrect!" message. (9 marks)

Online Quiz

Q?: J2EE specifies both the service APIs for building the application and the infrastructure for managing the application.

◉ True   ○ False

Submit

Answer is correct!

(c) Write a java server page to display the fibonacci series by using jstl library. In the fibonacci series, *next number is the sum of previous two numbers*. The first two numbers of fibonacci series are 0 and 1. (9 marks)

http://localhost:8080/QQQ/jstlfibonacci.jsp?number=12

Enter Number: 12   Fibonacci

Fibonacci-Series: 0, 1, , 1 , 2 , 3 , 5 , 8 , 13 , 21 , 34 , 55 , 89

5. (a) Write a code segment to load database driver if not already loaded. (2 marks)

(b) Create a dynamic web application to implement Employee Management System using Database. Assume that, there is a database named "**empdb**" and a table named "**empSalary**" which includes three attributes: **name**, **position** and **salary**. Employee calculates their total salary based on their bonus and save their information into the table in Figure_1. If their insertion is successful, it displays all records in the table in Figure_2. (18 marks)

Employee Management System

Name :	Thetmhu
Position :	Cashier
Salary :	300000
Bonus(%) :	15
Save Total Salary	

Figure_1

Employee Management System

Name	Position	Salary
John	Manager	1150000.0
Thetmhu	Cashier	345000.0

Insertion is successful!

Figure_2

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