



UNIVERSITY EXAMINATIONS: 2022/2023
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
SOFTWARE DEVELOPMENT
BSD 2304 ADVANCED JAVA PROGRAMMING
FULLTIME/ PART TIME/DISTANCE LEARNING
ORDINARY EXAMINATION

DATE: APRIL, 2024

TIME: 2 HOURS

INSTRUCTIONS: Question One is Compulsory, Choose Two Other Questions

QUESTION ONE (20 MARKS) Compulsory

- a) What are the basic characteristics of Hyper Text Transfer Protocol? [4 marks]
- b) What are the benefits provided by JSP over Servlet? [4 marks]
- c) Write a program that uses JSP declaration tag to define a method which returns the cube of given number and calling this method from the JSP expression tag [5 marks]
- d) Using codes as examples, describe the steps of creating a JavaFX application [7 marks]

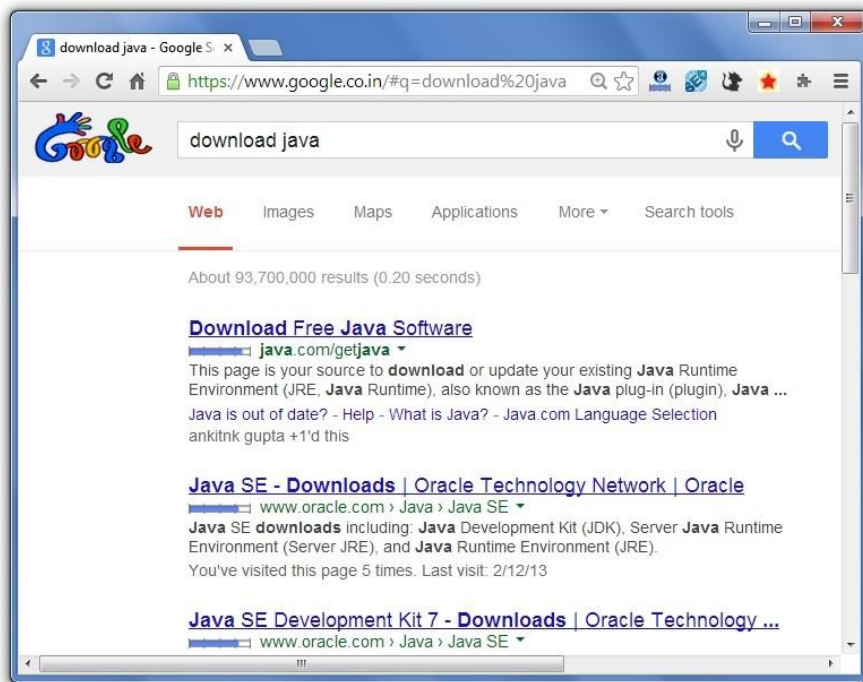
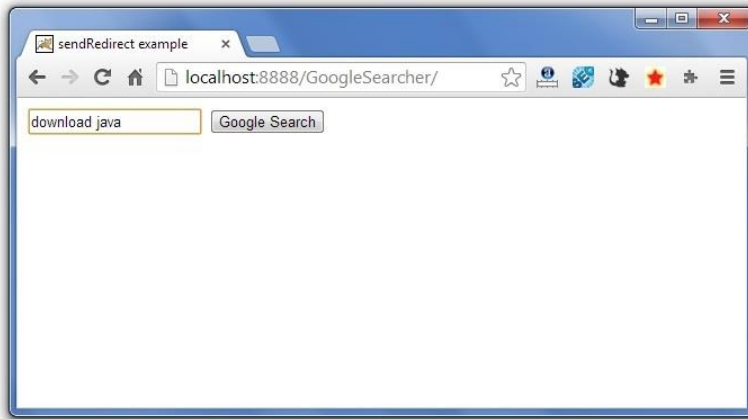
QUESTION TWO (15 MARKS)

- a) Write a servlet program for validating the password entered by the user. If password is servlet, it will forward the request to the WelcomeServlet, otherwise will show an error message: **sorry username or password error** [8 marks]
- b) To upload the file to the server, there are two requirements:
 - i) You must use the post request.
 - ii) encodeType should be multipart/form-data that gives information to the server that you are going to upload the file.

You are required to create files namely index.jsp and fileupload.jsp and use them to demonstrate how JSP can be used to upload files. [7 marks]

QUESTION THREE (15 MARKS)

- a) Describe the procedure of using JDBC to connect to a database [4 marks]
- b) Write a program that facilitates client server computing using RMI [5 marks]
- c) Write a program using sendRedirect method to send request to the google server with the request data. The output should be like shown in the figures below [6 marks]



QUESTION FOUR (15 MARKS)

- a) Explain the advantages of using JavaFX in developing web applications [3 marks]
- b) A cookie is a kind of information that is stored at client side. Using servlet cookies you are required to create 3 links: login, logout and profile. In this case, a user can't go to the profile page until he/she is logged in. If the user is logged out, he needs to login again to visit the profile [8 marks]
- c) Describe how you can pass control from one JSP file to another [4 marks]