

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 121/MS 501: Structure Programming (Day + M.Sc.)**

**Course Teacher: Ahmed Abdullah (01680076500, [ahmed.abdullah@royal.edu.bd](mailto:ahmed.abdullah@royal.edu.bd))**

Assignment Topic:

Design a **School Management System**.

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 231: Computer Algorithm (Day)**

**Course Teacher: Ahmed Abdullah 01680076500, [ahmed.abdullah@royal.edu.bd](mailto:ahmed.abdullah@royal.edu.bd)**

Assignment Topic:

Write down Pseudocode of Binary Search (user choice).

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: MS 602: Visual & Internet Programming (M.Sc.)**

**Course Teacher: Ahmed Abdullah 01680076500, [ahmed.abdullah@royal.edu.bd](mailto:ahmed.abdullah@royal.edu.bd)**

Assignment Topic:

How web API works in c#? Briefly explain

ROYAL UNIVERSITY OF DHAKA

Program: MSCSE

**Course Code: MS 571 and Course Title: Data Structure & Algorithms**

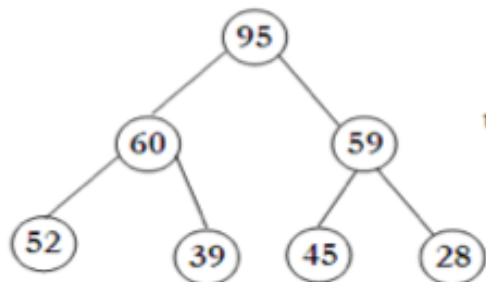
**Course Teacher: Rowjatul Zannat Eshita**

(Contact No: 01675742407, Mail: [rowjatul.eshita@royal.edu.bd](mailto:rowjatul.eshita@royal.edu.bd))

Assignment Topic:

Suppose key values 141, 211, 232, 624, 637, 544, 231, 561, 765, 851, 674, 342

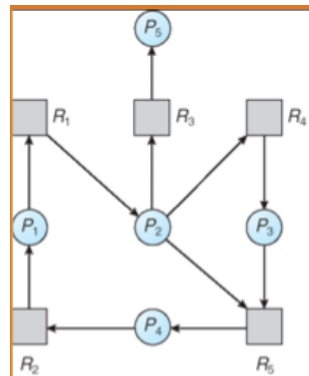
Find the Hash address of each key value using Division Method with  $m = 10$ , if collision occurs then use Chaining Method. Given List: 45, 28, 52, 25, 60, 70. Create heap using given data. Sort the given maxtree below using Heap Sort algorithm:



**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT**  
**Course Code: CSE 233 and Course Title: Operating System (DAY & EVENING)**  
**Course Teacher: Rowjatul Zannat Eshita**  
**(Contact No: 01675742407, Mail: [rowjatul.eshita@royal.edu.bd](mailto:rowjatul.eshita@royal.edu.bd))**

Assignment Topic:

What is Segmentation? Give an example. Describe the address translation of paging system. Draw a wait-for graph from the given resource allocation graph :



**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT**  
**Course Code: CSIT 325**  
**Course Title: Management Information System (DAY)**  
**Course Teacher: Rowjatul Zannat Eshita**  
**(Contact No: 01675742407, Mail: [rowjatul.eshita@royal.edu.bd](mailto:rowjatul.eshita@royal.edu.bd))**

Assignment Topic:

Who are entrepreneurs? Distinguish between Successful and Unsuccessful Entrepreneurs. Describe different market phases. How is Internet creating a global marketplace? What roles and tasks does the MIS department perform? How do you control a major development project? Why is control so important?

**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT**  
**Course Code: CSE-337, Course Name: Pattern Recognition**  
**Course Teacher: Md Khirul Islam Badal (01748864767, [khirul.badal@royal.edu.bd](mailto:khirul.badal@royal.edu.bd))**

**Assignment Topic:**

Write down the definition of Transpose Matrix and Identify Matrix. Implement the N Queen problem using CP approach where  $n = 3$ .

**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT/HMT/BBA**  
**Course Code: CSE-335, Course Name: Multimedia System Design**  
**Course Teacher: Md Khirul Islam Badal (01748864767, [khirul.badal@royal.edu.bd](mailto:khirul.badal@royal.edu.bd))**

**Assignment Topic:**

What is Quality of Service (QoS). What is the importance of QoS. How to measure the Quality of Service (QoS).

**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT/HMT/BBA**  
**Course Code: CSE-223, Course Name: Theory of Computing**  
**Course Teacher: Md Khirul Islam Badal (01748864767, [khirul.badal@royal.edu.bd](mailto:khirul.badal@royal.edu.bd))**

**Assignment Topic:**

What is Turing Machine? Write down the characteristics of deadlock. Write down the steps to avoid the Deadlock using banker deadlock avoidance algorithm.

**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT**  
**Course Code: CSIT-333, Course Name: Computer Graphics**  
**Course Teacher: Md Khirul Islam Badal (01748864767, [khirul.badal@royal.edu.bd](mailto:khirul.badal@royal.edu.bd))**

**Assignment Topic:**

What is Transformation. Write down the different types of transformation with an example. Given a line segment with starting point as (0, 0) and ending point as (4, 4). Apply 30-degree rotation anticlockwise direction on the line segment and find out the new coordinates of the line.

**ROYAL UNIVERSITY OF DHAKA**  
**Program: B.Sc. (HON'S) in CSE/CSIT**  
**Course Code & Title: CSE 315- Artificial Intelligence (Eve)**  
**Course Teacher: Hasan Abdullah (01681523656, [hasan.abdullah@royal.edu.bd](mailto:hasan.abdullah@royal.edu.bd))**

**Assignment Topic:**

How can you solve Tower of Hanoi puzzle problem where there are 3 rods and 3 disk? Explain the PRECONDITION, ADD and DELETE of PICKUP(x,y) and PUTDOWN(X,Y). Solve the block world problem of below figure step by step.

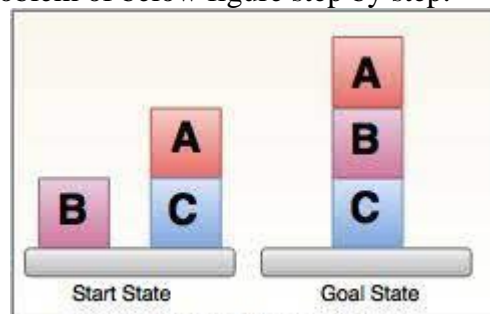


Fig: Blocks-World Planning Problem

ROYAL UNIVERSITY OF DHAKA  
Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 321: Computer Peripheral & Interfacing [Eve]**  
**Course Teacher: Hasan Abdullah (01681523656, hasan.abdullah@royal.edu.bd)**

Assignment Topic:

Write a short on UPC-A, CODE 128 and ISSN barcode. Calculate the check digit of code: 7 3 5 1 3 5 3 using EAN-8 barcode technique. Classify barcode scanner according to form. How does Bubble jets Printer Work?

ROYAL UNIVERSITY OF DHAKA  
Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSIT 225: Data Communication (Eve)**  
**Course Teacher: Hasan Abdullah (01681523656, hasan.abdullah@royal.edu.bd)**

Assignment Topic:

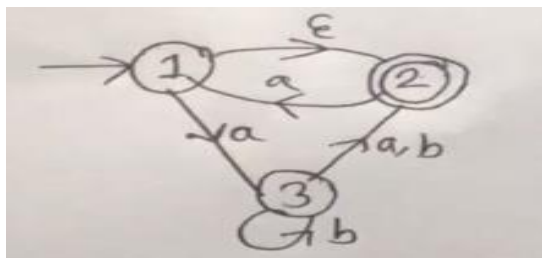
Briefly explain the classification of interconnected processors by scale. How does POP3 protocol work? Explain the core protocols of transport layer. Define the type of the following destination addresses: (a) 4A:30:10:21:10:1A (b) 47:20:1B:2E:08:EE (c) FF:FF:FF:FF:FF:FF

ROYAL UNIVERSITY OF DHAKA  
Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 329: Compiler Design (Eve)**  
**Course Teacher: Hasan Abdullah (01681523656, hasan.abdullah@royal.edu.bd)**

Assignment Topic:

Write down the properties of pushdown automata. Write a short note on i) Top down parsing and ii) Bottom up parsing. Convert the  $\epsilon$ -NFA (epsilon NFA) to DFA step by step using the below figure.



ROYAL UNIVERSITY OF DHAKA  
Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 327 - Web Development (Eve)**  
**Course Teacher: Md. Nur-E-Arefin (01675025549, nur.arefin@royal.edu.bd)**

Assignment

**Assignment Topic:**

Design & develop a university management website by using HTML, CSS and JavaScript. Use all the techniques that are taught in the class. Your website must have multiple pages and registration system by using form. Your website should be dynamic by using JavaScript. Write proper report about your website by taking screen shots and submit in pdf format.

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 133 - Data Structure & Algorithm (Eve)****Course Teacher: Md. Nur-E-Arefin (01675025549, nur.arefin@royal.edu.bd)****Assignment****Assignment Topic:**

What is linked list? Explain with diagram: single linked list and doubly linked list. Write down the algorithm of traversing a linked list. Explain binary tree with proper figure. What is graph? Describe directed and undirected graph with diagram.

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSE 311 - Database Management System (Day + Evening)****Course Teacher: Md. Nur-E-Arefin (01675025549, nur.arefin@royal.edu.bd)****Assignment****Assignment Topic:**

Explain complex check conditions in SQL. Describe the three forms of outer join with proper example. What is materialized view? How to create and delete views in SQL? Explain integrity constraints on SQL. What is E-R diagram? Draw an E-R diagram of a university by showing cardinality constraints, primary key, weak entity sets and redundant attributes. How to show complex attributes on E-R diagram.

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: CSIT-107: Optical Fiber Communication****Course Teacher: Md. Ealius Azam Sha (01676085809, ealius.sha@royal.edu.bd)****Assignment****Assignment Topic:**

Explain the signal degradation in optical fiber communication with proper diagrams and suggest what can we do to improve the signal quality.

ROYAL UNIVERSITY OF DHAKA

Program: B.Sc. (HON'S) in CSE/CSIT

**Course Code & Title: EEE-101: Electrical Engineering****Course Teacher: Md. Ealius Azam Sha (01676085809, ealius.sha@royal.edu.bd)****Assignment****Assignment Topic:**

What type of circuit in Fig. -A is? State and explain Nodal and Mesh analysis of a circuit with proper example to calculate voltage, current.

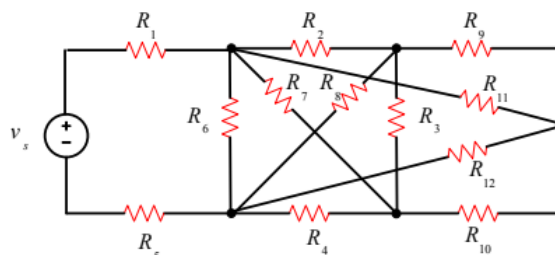


Fig. - A

**ROYAL UNIVERSITY OF DHAKA****Program: B.Sc. (HON'S) in CSE/CSIT****Course Code: CSE-111, Course Name: Computer Fundamentals****Course Teacher: Shaikh Afnan Birahim (01711027668, afnan.birahim@royal.edu.bd)****Assignment**

Explain which universal gate is better. Differentiate between variable word-length memory and fixed word-length memory. Explain subprogram with its types.

**ROYAL UNIVERSITY OF DHAKA****Program: B.Sc. (HON'S) in CSE/CSIT****Course Code: CSIT-313, Course Name: Computer Network****Course Teacher: Shaikh Afnan Birahim (01711027668, afnan.birahim@royal.edu.bd)****Assignment**

Explain TCP 3-way handshake with necessary diagrams. Describe the functions of session layer. Describe how trojan horse works with diagrams.

**ROYAL UNIVERSITY OF DHAKA****Program: B.Sc. (HON'S) in CSE/CSIT****Course Code: MAT-105, Course Name: Statistics and Probability****Course Teacher: Shaikh Afnan Birahim (01711027668, afnan.birahim@royal.edu.bd)****Assignment**

Explain kurtosis. Briefly describe range and standard deviation.

Find  $Q_3$ ,  $D_4$ ,  $P_{80}$  using the following data from graph.

Class Interval	5-10	10-15	15-20	20-25	25-30
Frequency	6	9	17	13	9

**ROYAL UNIVERSITY OF DHAKA****Program: B.Sc. (HON'S) in CSE/CSIT****Course Code & Title: GED 102: Research Project Proposal****Course Teacher: Ahmed Abdullah 01680076500, ahmed.abdullah@royal.edu.bd****Assignment**

Assignment Topic:

What is Research Report? Identify the main components for writing a research report.