

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSIT-225 & Data Communication (Evening)
Course Teacher: Subhra Prosun Paul (01675932517, subhra.paul@royal.edu.bd)

Assignment

Assignment Topic:

'Delivery, accuracy, timeliness & jitter are the four fundamental characteristics of effective data communication system'- Explain the statement. How can you represent data in data communication system? Describe different data flow mode with figure.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSIT- 331 & Advance Computer Network(Evening)
Course Teacher: Subhra Prosun Paul (01675932517, subhra.paul@royal.edu.bd)

Assignment

Assignment Topic:

'In order to make a point to point connection between each pair of devices in a computer network, a better solution is switching'- Why? Explain with figure. Give a comparative study among circuit switched network, datagram network and virtual circuit network.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 233 & Operating System (Evening)
Course Teacher: Subhra Prosun Paul (01675932517, subhra.paul@royal.edu.bd)

Assignment

Assignment Topic:

Give the structure of operating system in computer system. 'Processor management, memory management and file management are the important function of operating system'- Explain the statement. How can you classify different types of operating system?

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 131 & Digital Electronics (Evening)
Course Teacher: Subhra Prosun Paul (01675932517, subhra.paul@royal.edu.bd)

Assignment

Assignment Topic:

How can you differentiate between analog signal and digital signal? Analyze digital circuit with advantages. 'Logic circuit can be categorized into two type in digital electronics-combinational circuit and sequential circuit'- Explain the statement.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: MSCSE
Course Code & Title: MS 513 & Computer Organization and Assembly Programming
Course Teacher: Subhra Prosun Paul (01675932517, subhra.paul@royal.edu.bd)

Assignment

Assignment Topic:

Give a comparative study between computer organization and computer architecture. 'Stored program concept was first implemented in Von Neumann concept'- Explain the statement. What are the advantages of Harvard computer architecture over Von Neumann architecture?

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: MSCSE
Course Code & Title: MS 641 & Software Engineering and Project Management
Course Teacher: Subhra Prosun Paul (01675932517, subhra.paul@royal.edu.bd)

Assignment

Assignment Topic:

Why software engineering is important in modern life? 'Software engineering is related to both computer science and system engineering'- How? Give your own opinion. In case of professional responsibility, explain the ethics of a software engineer.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: EEE 106-Telecommunication
Course Teacher: Ahmed Abdullah (01680076500, ahmed.abdullah@royal.edu.bd)
Assignment

Assignment Topic:

Explain the concept of radio communication system. How can we modulate two or more signal? Describe. Draw Bandwidth frequency diagram.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: EEE 101 & Electrical Engineering
Course Teacher: Ahmed Abdullah 01680076500, ahmed.abdullah@royal.edu.bd
Assignment

Assignment Topic:

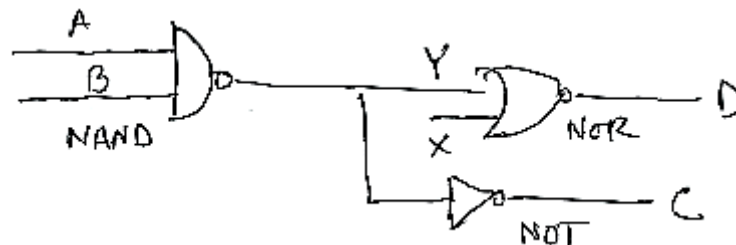
Write the differences between AC & DC current. Why grounding is necessary? Explain. Proved KVL and KCL (used an ideal circuit and any values for resistor and voltage source)

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: EEE 103: Electronics Engineering (Bhairab)
Course Teacher: Ahmed Abdullah 01680076500, ahmed.abdullah@royal.edu.bd
Assignment

Assignment Topic:

Calculate rise delay using 3 segment T-model/ π -model for wire, which is 5mm long and 0.32m wide, with resistance of 0.05π and a capacitance per width of 0.2fF/m. The given MOS resistance and capacitance are $3k \pi$ and 280fF. Find the rise delay (A=0 & B=1) and fall delay (A=1 & B=1) for the following figure.



Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: MSCSE
Course Code & Title: MS 691: Data Mining & Warehousing
Course Teacher: Rowjatul Zannat Eshita
(Contact No: 01675742407, Mail: rowjatul.eshita@royal.edu.bd)

Assignment (**Submission deadline: 28th July, 2020**)

Assignment Topic:

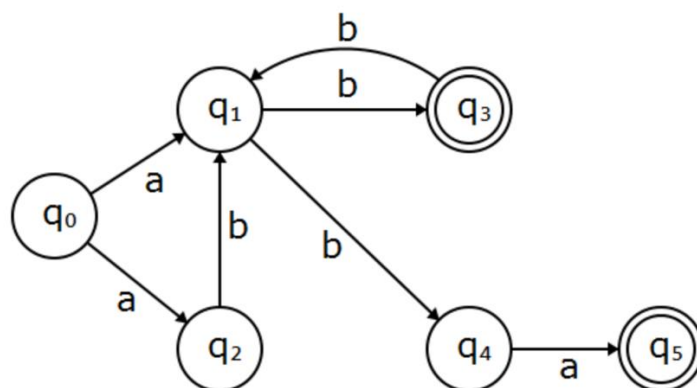
Define data mining. Discuss about different challenges while implementation of data mining. What is OLTP and OLAP? Show the steps to implement a Data Warehouse. Write down the advantages and disadvantages of data mining and data warehousing.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 223: Theory of Computing (Evening)
Course Teacher: Rowjatul Zannat Eshita
(Contact No: 01675742407, Mail: rowjatul.eshita@royal.edu.bd)

Assignment (**Submission deadline: 28th July, 2020**)

Assignment Topic:

Construct the truth table for the followings: $(P \vee Q) \Rightarrow ((P \vee Q) \Rightarrow (R \vee Q))$ and $(P \vee (Q \Rightarrow R)) \Leftrightarrow ((P \vee \sim R) \Rightarrow Q)$. Consider the NDFFA shown in the figure below and convert it to an equivalent DFA:



ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: EEE 109: Microcontroller (Day & Evening)
Course Teacher: Rowjatul Zannat Eshita
(Contact No: 01675742407, Mail: rowjatul.eshita@royal.edu.bd)

Assignment (Submission deadline: 28th July, 2020)

Assignment Topic:

What is embedded system? Distinguish between microprocessor and microcontroller. Define RISC architecture with a proper example. Illustrate the architectural difference between AVR microcontrollers and PIC microcontrollers.

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

Assignment (Submission deadline: 28th July, 2020)

Assignment Topic:

What is good information? Discuss about the characteristics of good information. What are the primary threats to an information system and also distinguish between: Manual Information Systems and Computerized Information Systems, E-commerce and E-business, Waterfall model and Agile development.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSIT 331: Advance Computer Network (Day)
Course Teacher: Md. Nur-E-Arefin (01675025549, nur.arefin@royal.edu.bd)

Assignment

Assignment Topic:

- a) What is network topology? Explain with advantages and disadvantages.
- b) Discuss about the network core. Explain circuit switching and packet switching.
- c) What is Cryptography? Explain three cryptographic algorithms briefly.
- d) Discuss about different transmission media.
- e) Find out the nodal delay where $L=7.5$ Mbits, $R=1.5$ Mbps, $D=100$ meter, average packet arrival rate=190 pps and processing delay is 5 micro seconds.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 231 & Computer Algorithm
Course Teacher: Md. Nur-E-Arefin (01675025549, nur.arefin@royal.edu.bd)

Assignment

Assignment Topic:

Write down the pseudocode, detailed algorithm, flow chart and programming implementation for the following problems:

- a) Write an algorithm to determine a student's final grade and indicate whether it is passing, failing or average marking. The final grade is calculated as the average of six marks.
- b) Write an algorithm that will read the radius of a circle and calculate its area.
- c) Write an algorithm that will calculate the roots of a quadratic equation $ax^2 + bx + c = 0$.
- d) Write an algorithm that reads three values, determines the largest value and prints the largest value with an identifying message.
- e) Write an algorithm to read an employee overtime hour, absent hours and determine the bonus payment. [BONUS= OVERTIME – (2/3) *ABSENT]

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 335: Multimedia System Design
Course Teacher: Md. Nur-E-Arefin (01675025549, nur.arefin@royal.edu.bd)

Assignment

Assignment Topic:

- a) Install 4 new font styles and write 5 lines paragraph with each style
- b) Write down about bitmaps and vector drawing.
- c) Discuss image compression briefly.
- d) Differentiate between GIF, JPEG, TIF, PNG, RAW and BMP. List name of compression algorithms used by these image formats.
- e) Use at least two online image compression tools to compress your image file and write your findings in word processing application by using serif and sans serif styles.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT / BBA / B.A. (HON'S) in English, HMT
Course Code & Title: CSE 109: Computer Application / CSE 111: Computer Fundamentals
Course Teacher: Shormee Saha (01817561452, shormee.saha@royal.edu.bd)

Assignment

Assignment Topic:

Anushka used her webcam to record a video on how to make a paper-boat with the vocal instructions as well. She watched the video to check whether audio and video quality is perfect or not. She uploaded the video on her Instagram with an attractive caption. List out the input and output devices involved in the entire process with their general use in life. Mention and explain the functional steps on how the computer is processing this task demonstration with the tasks involved in CPU as well.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 213: Object Oriented Programming (EVE)
Course Teacher: Shormee Saha (01817561452, shormee.saha@royal.edu.bd)

Assignment

Assignment Topic:

Create a public class "Library" in java with 2 objects and explain the components of the class and objects identifying them from your code.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 316: Artificial Intelligence (Eve)
Course Teacher: Shormee Saha (01817561452, shormee.saha@royal.edu.bd)

Assignment

Assignment Topic:

Neha decided to take online dance lessons. She started to watch the videos of Ridy Sheikh and copy her steps. Ridy also explains difficult steps breaking into parts. She has been practicing from the childhood to become an expert today. However, Neha has a very small room and so she changes few of the steps accordingly cause, what she requires from Ridy is the motivation.

Identify and define the learning categories and intelligence types involved in each of the steps of the mentioned event with proper examples.

Submission deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: MS 671 - Object Oriented Programming Language
Course Teacher: Mosharrof Hussain Masud

Assignment

Assignment Topic: Write the unique features of Object Oriented Programming (OOP). Discuss the following terms with OOP examples: Inheritance, Overloading, Polymorphism, and Encapsulation. Write an example of 'class' and 'object' using "Student Admission Procedure" in a university.

Submission Deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSIT 333 - Computer Graphics
Course Teacher: Mosharrof Hussain Masud

Assignment

Assignment Topic: Write the applications of computer graphics. Discuss the RGB color combinations in computer graphics. Explain the mechanism of Light Emitting Diode (LED) and Liquid Crystal Displays (LCD).

Submission Deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: CSE 339 - Simulation & Modelling
Course Teacher: Mosharrof Hussain Masud

Assignment

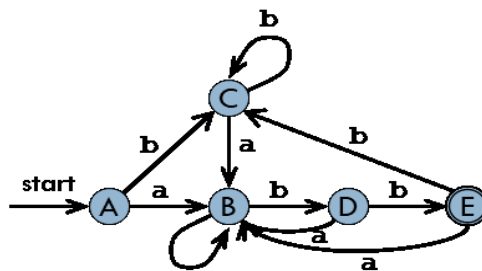
Assignment Topic: Define simulation and modeling with advantages and disadvantages. Discuss the steps of simulation and modeling process with flow chart.

Submission Deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
 Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: Compiler Design [Day]
Course Teacher: Mosharrof Hussain Masud

Assignment

Assignment Topic: Write the key features of compiler design. Design a Deterministic Finite Automaton (DFA) for the following figure with 5 tuples. Verify any 2 randomly generated strings those support this DFA.

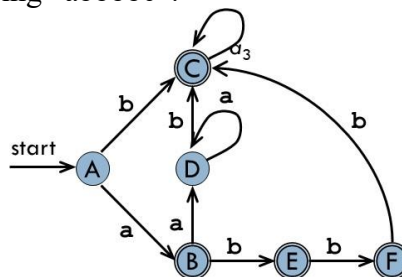


Submission Deadline: 28th July, 2020.

ROYAL UNIVERSITY OF DHAKA
 Program: B.Sc. (HON'S) in CSE/CSIT
Course Code & Title: Compiler Design [Evening]
Course Teacher: Mosharrof Hussain Masud

Assignment

Assignment Topic: Discuss the importance of Compiler Design in Computer Science. Design a Deterministic Finite Automaton (DFA) for the following figure with 5 tuples and check a Language Machine L(M) of string “abbbbc”.



Submission Deadline: 28th July, 2020.