

Daffodil International University  
Department of Software Engineering  
Faculty of Science & Information Technology  
Midterm Examination, Spring 2023

Course Code: SE323;  
Course Title: Software Architecture and Design  
Sections & Teachers: SSG (A)

Marks: 25

Time: 1 Hour 30 Mins

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes.  
All portions of each question must be answered sequentially.]

1	a)	Compare allocation structure and module architecture.	[Marks- 5]	CLO-1 Level-2
	b)	Illustrate process view of "DIU Blended Learning center".	[Marks-6]	CLO-1 Level-2
2	a)	For a gaming streaming service (Ex. clash of clans), would you choose monolithic architecture? Explain it.	[Marks-4]	CLO-2 Level-2
	b)	Build the broker architecture pattern for social media service (ex. Instagram).	[Marks-5]	CLO-2 Level-3
3	a)	Suppose you've been asked to evaluate the architecture for a system in confidence. The architect isn't available. You aren't allowed to discuss the evaluation with any of the system's stakeholders. Analyze how would you proceed?	[Marks-5]	CLO-3 Level-4



# Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Final Examination, Spring 2023

Course Code: SE321; Course Title: Software Engineering Web Application

Sections & Teachers: All

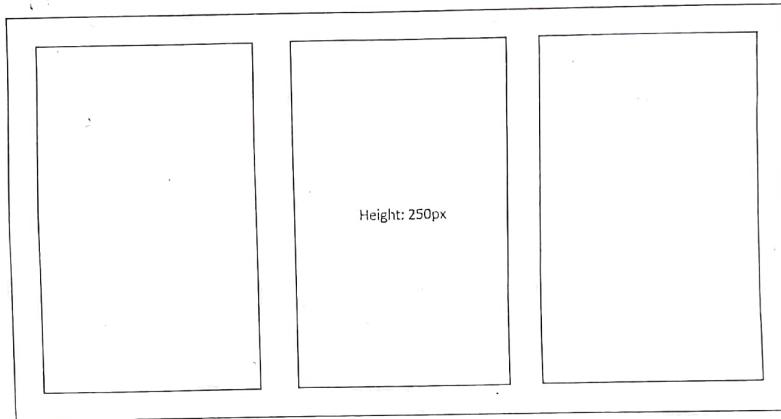
Time: 2:00 Hrs

Marks: 40

**Answer ALL Questions**

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.



Evaluate your understanding of Flexbox by designing and developing the layout shown above.

[Marks-5]

CLO-2  
Level-6

2.

Welcome to Our Website

Complete Purchase

Before Clicking the Button

Thank You For Your Purchase

Complete Purchase

After Clicking the Button

Develop a JavaScript code that will change the "Welcome to Our Website" text to "Thank You For Your Purchase" on the click of the "Complete Purchase" button. Also the "Complete Purchase" button should be disabled after the click. The outputs should look like the above example.

[Marks-10]

CLO-3  
Level-3

3.

\$cities = array( "Italy"=>"Rome", "Belgium"=> "Brussels",  
"Denmark"=>"Copenhagen", "Finland"=>"Helsinki", "France" =>  
"Paris", "Germany" => "Berlin", "Greece" => "Athens",  
"Ireland"=>"Dublin", "Netherlands"=>"Amsterdam",  
"Sweden"=>"Stockholm", "United Kingdom"=>"London", "Austria"  
=> "Vienna", "Poland"=>"Warsaw" ) ;

[Marks - 5]

CLO-4  
Level-3

Develop a PHP script which displays the capital and country name from the above array \$cities.

*Sample Output :*

The capital of Netherlands is Amsterdam  
The capital of Greece is Athens  
The capital of Germany is Berlin

b) Develop a PHP script to calculate and display average temperature and five lowest temperatures.

Recorded Temperatures: 78, 60, 62, 68, 71, 58, 73, 85, 66, 64, 76, 63, 75, 76, 73, 68, 62, 73, 72, 65, 74, 62, 65, 64, 68, 73, 75, 79, 73

*Sample Output:*

Average Temperature is : 70.6

List of seven lowest temperatures : 60, 62, 63, 63, 64

*array[ 0 ] , 1 , 2 , 3 , 4 , 5 , 6 ] ; ? >*

[Marks-5]

## Register

[Marks-10]

CLO-4  
Level-3

Kindly fill in this form to register.

**Username**

Enter username

**Email**

Enter email

**Password**

Enter password

**Repeat Password**

Repeat password

Already have an account? [Log in](#)

Consider the registration form above. Now develop a PHP script for sanitizing the above form and validate the data for the following rules.

- No fields can be empty.
- Email should be in valid format
- Password must be at least 8 characters long
- Password and Repeat Password must match

Remember that you do not need to write any HTML and CSS code. Beside it is not necessary to output the errors in the webpage, just storing them in error variables are enough for the task. Also, you are not required to write any code for database connection and storing process hence it is not required in this question.

What is MVC Framework? Explain in details with proper diagram.  
*Model Value Control*

[Marks-5]

CLO-4  
Level-6



Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Final Examination, Spring 2023

Course Code: SE 442/ SWE 412, Course Title: Management Information System

Level: 2 Term: 2 Section: A

Instructor: IM

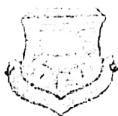
Date: 10-06-2023 Time: 12:00 PM - 02:00 PM (B Slot)

Duration: 2 Hrs Marks: 40

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Established in 2000, Bdjobs.com Limited operates the largest online employment exchange of Bangladesh. www.bdjobs.com is the largest job portal in the country and also one of the most visited web sites in Bangladesh. It is also among the top five (5) visited job portal in South Asia. Vision: The vision of the company is to try bringing Internet technology in the mainstream business and economic life of the society. In the last eighteen (18) years of operation, over 1,000,000 professionals have found suitable employment for themselves through our services in 18,000+ organizations, both in Bangladesh and other parts of the world. The online CV database of Bdjobs.com hosts structured CVs of over 1,900,000 professionals. This is the largest electronic database of professionals in the country. The site has a user base of over 2,500,000 visitors. Every day 150,000+ people visit www.bdjobs.com, making it the most popular local website in the country. The monthly page view of the site is over 40 million. The site displays more than 4,000 job advertisements in any point of time. So far, our training department has organized training programs to train (in different professional skills & tracks) to over 50,000 professionals from over 5,000 organizations. Currently we are the largest corporate training provider in the country.

- ✓ 1. Examine two predictive analytics for **bdjobs**. [5] [CLO 1, Level 4]
- ✓ 2. Interpret the data of **bdjobs** by mentioning 10 hypothesis (5 for one sample t-test and 5 for independent sample t-test). [10] [CLO 1, Level 5]
- ✓ 3. Apply Kanban and WBS framework for **bdjobs** app . [10] [CLO 2, Level 3]
- ✓ 4. Discover strategies how self paced e-learning online, and groups based e-learning asynchronous can support **bdjobs** users. [10][CLO 2, Level 4]
- ✓ 5. Analyze two different types of software maintenance for **bdjobs** website with example. [5] [CLO2, Level 4]



Daffodil International University  
Department of Software Engineering

Faculty of Science & Information Technology

Final Examination, Spring 2023 (Edit here if needed)

Course Code: SE323; Course Title: : Software Architecture & Design

Sections & Teachers: SSG (A), AM (B)

Time: 2:00 Hrs

Marks: 40

**Answer ALL Questions**

*[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]*

1	a)	Develop the monolithic architecture design for an e-commerce application one by one as per requirements.	[Marks-5]	CLO-2 Level-3
	b)	New products will pivot and evolve as you figure out what will be useful to your users. For this, a monolith is perfect as it allows for rapid product iteration. How to solve it and also identify the pros and cons of this system	[Marks-5]	

A healthcare organization is developing a new electronic medical records (EMR) system to manage patient information across its network of hospitals and clinics. The system needs to be user-friendly, fast, and reliable to ensure that healthcare providers can access patient data quickly and efficiently. The system should also be secure to protect patient privacy and comply with relevant regulations. The EMR system should include features such as patient history, diagnostic imaging, and laboratory results.

2	a)	Analyze a plan for designing the system architecture providing usability and easy navigation techniques.	[Marks-6]	CLO-3 Level-4
	b)	Examine the steps can be taken during the ATAM process to identify potential security vulnerabilities and ensure that the system meets reliability requirements?	[Marks-6 ]	

A technology company is developing an autonomous vehicle system for use in ride-hailing services. The system will be installed in electric vehicles and will allow passengers to request rides using a mobile app, with no driver required. The company aims to revolutionize the ride-hailing industry by offering a safe, convenient, and eco-friendly transportation solution.

3	a)	Formulate a plan to ensure optimize the system's routing algorithms and reduce response times for ride requests?	[Marks-5]	CLO-3 Level-4
	b)	If a software architect is not familiar with evaluation techniques like ATAM, propose alternative methods that can be used to assess the autonomous vehicle system's architecture and ensure that it meets the company's requirements?	[Marks-6]	
4	a)	Discuss the fault detection tactics (ping/echo, heartbeat, system monitor, voting and exception detection). Design a concrete	[Marks-4]	CLO-4 Level-4

	availability for a program like Microsoft word.		
b)	Plan five scenarios (based on prioritization) for a project and ease of modifiability on the software system.	[Marks-3]	

*Note: You may add or delete rows as per your requirements. Mention CLO's in the right side of the table as per your course outline.*



Daffodil International University  
Department of Software Engineering  
Faculty of Science & Information Technology  
Final Examination, Spring 2023; Course Code: SE441,  
Course Title: Software Engineering and Professional Ethics

Section & Teacher: A, B & DM; Date: 20/06/2023; Time: 9 AM – 11:00 AM (Slot-A)

Time: (2:00 hrs);

Marks: 40

Directions:

- Students need to go through the CASE STUDY shown in this exam paper.
- Texts in square brackets indicate Course Learning Outcomes and Bloom's Taxonomy Level

**Case Study: 1**

Ms. Lara works for an IT firm. Her firm has 30 employees. This firm basically gets orders over the Internet for overseas clients. 30 employees work in five different sections. Each section has a section leader. Each section does not know what the other section does. After the completion of the task assigned to each section, only section leaders accumulate the tasks to make the complete product. Lara can communicate with all employees using his office email. Recently, she has had doubts that someone in the office is stalking her. Someone has gained access to her account and is taking valuable information from her section's task. If it is leaked to the public, she or her section's leader will be in danger. One day, she got an email in which she was mentally harassed. She knew it was someone from her office, as the email contained some information that would be known only to her colleagues. The next day, when she was using her computer, she saw some of the processes shutting down by themselves and some starting by themselves. Her computer had not responded to her for a minute. She let her leader know about this. They started to investigate this matter. However, two days later, a very unfamiliar incident happened to her firm. At 11:59 a.m. in the morning, all 30 computers in that firm became inaccessible. All the files were deleted. A picture came on everybody's desktop, saying it was revenge by one of their colleagues who had not come to work in the last three days.

**Case Study 2:**

A. S. Victor Whitmill, a tattoo artist, filed suit against Warner Bros. for their illegal use of a tattoo he created for Mike Tyson, which was subsequently depicted on a fictional character in the Warner Bros. film The Hangover, Part II.

B. Toymaker MGA Entertainment filed suit against Mattel, arguing that their line of "My Scene" Barbie dolls infringed upon the design of MGA's line of "Bratz" dolls, which had a similar appearance.

C. National Biscuit Co. filed suit against Kellogg Co. over their sale of shredded wheat cereal. According to National Biscuit Co., Kellogg's manufacture and sale of this product constituted unfair competition of their invention and monogram violation.

1.	A) Identify the hacking tactics that were possibly used by the hacker in above Case Study 1. Mention the name(s) and describe how they are used to hack a system. Plan how to avoid such hacking.	Marks: 5 [CLO 2 Level 3]
2.	<p>A) If you have been appointed as a Manager to an ICT firm, plan how you ensure that your entire team practices ethically following software engineering the code of conduct.</p> <p>B) Apply at least four professional conduct principles from each of the Self, Colleagues, Profession, Judgment, Management, and Product principles of the software engineering code of conduct.</p>	Marks: 6 [CLO 3 Level 4]  Marks: 8 [CLO 3 Level 4]

	A) Examine how IPR is relevant to the above Case Study 2 and which criteria can be highlighted here.	Marks: 6 [CLO 4 Level 4]
3.	B) Summarize patents and what are the things that can be patented and how long according to Bangladesh Patent Act.	Marks: 2 [CLO 4 Level 4]
4.	C) List all intellectual properties by categories. Why do we need rights for our intellectual properties?  A) Considering the above Case Study 1 and according to Digital Security Acts 2018, Identify the offenses against different individuals or organizations.  B) From Case Study 1 above and continuing 4(A) Analyze the answer relating to proper punishment according to Bangladesh Digital Security Acts 2018 for the crimes if committed.	Marks: 2 [CLO 4 Level 4]  Marks: 5 [CLO 5 Level 4]



# Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Final Examination, Spring 2023

Course Code: SE333; Course Title: Artificial Intelligence  
Sections: A32, A33, B32; Teacher: NF

Marks: 40

Time: 2:00 Hrs

**Answer ALL Questions**

*[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]*

1.	Mr. X is a car dealer, and Mr. Y is a potential customer. Mr. Y explored the showroom of Mr. X, and he is interested in buying a car. They sat in the seller's office for the negotiation.	[Marks-10]	CLO-3 Level-4										
	a) Analyze the problem and design a state-space landscape from this hypothetical car price negotiation by combining a global maximum, global minimum, multiple local maxima, and local minima.												
	b) Design two optimization algorithms by analyzing the concept of artificial intelligence from both buyer's and seller's perspectives. Write the pseudocode of the algorithms and provide enough logic to support the claim that your algorithm will work properly.												
2.	Dr. John and his research assistant Mr. Ron are working in Gulshan to determine the relationship between housing price and house size. They collected 311 instances and prepared a dataset.	[Marks-10]	CLO-4 Level-4										
	a) Construct the mathematical background of a machine learning algorithm if the dataset exhibits linear relations. Evaluate the effectiveness of your solution with a logical argument.												
	b) The following table contains a part of the entire dummy dataset:												
<table border="1"><thead><tr><th>Size (feet<sup>2</sup>)</th><th>Price (\$1000)</th></tr></thead><tbody><tr><td>2104</td><td>460</td></tr><tr><td>1416</td><td>232</td></tr><tr><td>1536</td><td>315</td></tr><tr><td>852</td><td>178</td></tr></tbody></table>		Size (feet <sup>2</sup> )		Price (\$1000)	2104	460	1416	232	1536	315	852	178	
Size (feet <sup>2</sup> )	Price (\$1000)												
2104	460												
1416	232												
1536	315												
852	178												
Analyze the dataset, calculate the mean error using an appropriate cost function when the hypothesis, $h_{\theta}(x) = \theta_0 + \theta_1 x$ . After that construct two graphs to compare the error with the cost function where the hypothesis is $h_{\theta}(x) = \theta_1 x$ , dataset contains the following values $(x, y) = \{(1,1), (2,2), (3,3)\}$ , and $\theta_1 = \{0.5, 1.0, 2.0\}$ .													

# Daffodil International University

Department of Software Engineering  
Faculty of Science & Information Technology

Quiz #2, Spring 2023

Course Code: SE 333; Course Title: Artificial Intelligence  
Sections: A, Batch 33; Course Teacher: NF

Marks: 15

Time: 15 minutes

**Answer ALL Questions**

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

- 1 Mr. X has posted an advertisement on Facebook to sell his car. Mr. Y is interested in buying it. They are having a conversation over the FM messenger. Apply an optimization algorithm to optimize the asking price from Mr. X's and Mr. Y's perspectives. [Marks-15] CLO 2, Level 3

# Daffodil International University

Department of Software Engineering  
Faculty of Science & Information Technology

Quiz #3, Spring 2023

Course Code: SE 333; Course Title: Artificial Intelligence  
Sections: A, Batch 33; Course Teacher: NF

Marks: 15

Time: 15 minutes

**Answer ALL Questions**

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

- 1 Bayesian network is good at predicting probability when the joint probability table is properly designed. Evaluate the predictive model of the Bayesian network by illustrating it properly and assigning a logical probability distribution to the elements of random variables. [Marks-15] CLO 4, Level 5

**Daffodil International University**  
**Department of Software Engineering**

**Course Code:** SE321

**Course Title:** Software Engineering Web Application

**Section:** A

**Duration:** 30 Minutes

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- |   |                  |
|---|------------------|
| 1. Write a PHP program to print all the values of the array below.  | <b>[Marks 5]</b> |
| <pre>\$arr = array("name" =&gt; "Rabby", "age" =&gt; 44, "fav_food" =&gt;<br/>array("Steak", "Biriyani", "Dal-Vat"));</pre>                 |                  |
| 2. Write a PHP function named "jadur_function" that will clean data using three popular methods – Trim, Stripslashes and HTMLSepecialChars. | <b>[Marks 5]</b> |
| 3. Write the difference between <b>bindValue</b> and <b>bindParam</b> method in Database operation using PDO.                               | <b>[Marks 5]</b> |



## Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Lab-Final Examination, Spring 2023

Course Code: SE334; Course Title: Artificial Intelligence Lab

Sections: A, Batch 33, Teachers: NF

Time: 40 Minutes

Marks: 40

### Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	<p>Analyze the following code snippet, identify the logical, conceptual, and syntactical errors, and rewrite the corrected code version:</p> <pre>open("banknotes.csv") with f:     reader = csv.reader(file)     next(file)      data = []     for row in reader:         data.append({             "evidence": [float(cell) for cell in row[:4]],             "label": "Authentic" if row[4] == "0" else "Counterfeit"         })</pre>	[Marks-10]	CLO-1 Level-4
2.	<p>Suppose Faysal goes to the <u>gym</u> on <u>Sunday</u>. However, if there is an <u>examination</u> on Sunday, he spends time in the <u>library</u> instead of going to the gym. If there is an exam on Sunday, where can we find Faysal? Demonstrate the application of the model-checking algorithm to discover the answer to this question.</p>	[Marks-10]	CLO-2 Level-3
3.	<p>Design a Bayesian network by rewriting the following code snippet to create a network with four nodes. These nodes are registration, classes, examinations, and result. Use logical relations among these nodes to create the Bayesian network.</p> <pre>model = BayesianNetwork() model.add_states(car, speed, careless, accident)  model.add_edge(car, speed) model.add_edge(speed, careless)</pre>	[Marks-10]	CLO-3 Level-6

	<pre>model.add_edge(careless, accident) model.add_edge(accident, end)  model.bake()</pre>		
4.	<p><b>Construct</b> an accurate and logical explanation of the code snippet given below. Make your explanation brief. Remember, a proper explanation is more effective than a lengthy explanation.</p> <pre>holdout = int(0.40 * len(data)) random.shuffle(data) testing = data[:holdout] training = data[holdout:]  X_training = [row["evidence"] for row in training] y_training = [row["label"] for row in training] model.fit(X_training, y_training)</pre>	[Marks-10]	CLO-4 Level-6



## Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Lab-Final Examination, Spring 2023

Course Code: SE334; Course Title: Artificial Intelligence Lab

Sections: A, Batch 32, Teachers: NF

Time: 40 Minutes

Marks: 40

### Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1. Analyze the following code snippet, identify the logical, conceptual, and syntactical errors, and rewrite the corrected code version: [Marks-10] CLO-1 Level-4

```
rain = symbol("rain")
hagrid = symbol("hagrid")
dumbledore = symbol("dumbledore")
```

```
knowledge = or(
    Implication(Not(rain), hagrid)
    or(hagrid, dumbledore)
    not(And(hagrid, dumbledore))
    dumbledore
)
```

```
print(check(knowledge))
```

2. Demonstrate the data structure concept by writing a class to implement the BFS algorithm. The class must contain the necessary properties and methods to solve the Maze problem. [Marks-10] CLO-2 Level-3

3. Design a Bayesian network by rewriting the following code snippet to create a network with four nodes. These nodes are storm, maintenance, train, and appointment, where the storm is the root node. It is connected to maintenance. Maintenance is connected to the train, and the train is connected to the appointment node. [Marks-10] CLO-3 Level-6

```
model = BayesianNetwork()
model.add_states(rain, maintenance, train,
appointment)

model.add_edge(rain, maintenance)
model.add_edge(rain, train)
model.add_edge(maintenance, train)
```

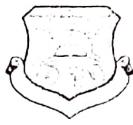
```
model.add_edge(train, appointment)  
model.bake()
```

4. Construct an accurate and logical explanation of the code snippet given below. Make your explanation brief. Remember, a proper explanation is more effective than a lengthy explanation.

```
with open("banknotes.csv") as f:  
    reader = csv.reader(f)  
    next(reader)  
  
    data = []  
    for row in reader:  
        data.append({  
            "evidence": [float(cell) for  
cell in row[:4]],  
            "label": "Authentic" if row[4]  
== "0" else "Counterfeit"  
        })
```

[Marks-10]

CLO-4  
Level-6



Daffodil International University  
Department of Software Engineering  
Faculty of Science & Information Technology

Quiz 3, Spring 2023, Instructor: Debabrata Mallick (DM), Section: A & B

Course Code: SE441 & SE413; Course Title: Software Engineering & Professional Ethics  
Time: 30 Minutes

Marks: 15

**Case Study 1:**

In 2018, a criminal group that engaged in cyber-organized crime was involved in a business email compromise attack and caused a huge loss for another public organization. They could manage to get into the server of the National Assembly and change the home page of them. They collected lots of classified (confidential) information about the national assembly and Members of the Parliament. The intruders threatened the ICT division of assembly to shut its' server and online activities down if they were not satisfied by a huge amount. At last, the ICT division could manage their security without paying. However, after a while, in many cyberspaces worldwide, classified information started leaking (found) up, which caused a huge loss of fame about national ICT standards and affected some international relations too. It has been thought that the intruders sold this information to Darkode.

17. 23,

[Note: Cybercriminals Darkode, is an underground, password-protected online forum that was a meeting place for those interested in buying, selling, and trading malware, botnets, stolen personally identifiable information, credit card information, hacked server credentials, and other pieces of data and software that facilitated complex cyber-crimes all over the globe.]

**Question 1:** Considering the above Case and according to Digital Security Acts 2018, Identify the offenses against different individuals and organizations. [CLO 4, Level 4] 6 Marks

**Question 2:** Following your answer to Q2. Categorize the proper punishment according to Bangladesh Digital Security Acts 2018 for the crimes if committed. [CLO 3, Level 4] 9 Marks



# Daffodil International University

## Department of Software Engineering Faculty of Science & Information Technology

Midterm Examination, Spring 2023

Course Code: SE321; Course Title: Software Engineering Web Application

Sections & Teachers: A (SFR)

Date: 11 March 2023

Time: 11:30 AM – 01:00 PM

Time: 1 Hour 30 Minutes

Marks: 25

### Answer ALL Questions

*[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]*

1.	a)	Explain any four attributes of a high-quality web application.	[Marks-5]	CLO-1 Level-4
	b)	You have joined a start-up company that works with web technologies as a consultant. As part of your first day training, you are required to provide an extensive overview on how a webpage is rendered within the browser. You are using <a href="https://www.fakename.com">https://www.fakename.com</a> as an example which has 1 HTML page and 4 JPEG images. The size of the HTML page is 0.5 MB and the size of the first 2 JPEG image is 3 MB (each) and the last 2 JPEG image is 4 MB (each). Now you need to discover the calculation of time taken to render the full webpage for Persistent HTTP connection.  RTT - 0.03 ms 2mb - 0.3 ms	[Marks-5]	
2.	a)	Develop the form below using necessary HTML and CSS.	[Marks-7]	CLO-2 Level-3

Registration Form

First Name <input type="text" value="First Name"/>
Last Name <input type="text" value="Last Name"/>
Email: <input type="text" value="Email"/>
Password <input type="password" value="Password"/>
Gender <input type="radio"/> Male <input type="radio"/> Female
Expertise - SELECT YOUR AREA OF EXPERTISE -- <input checked="" type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Internet of Things <input type="checkbox"/> Blockchain
<input type="button" value="Complete Registration"/>

Activate Windows  
Get to Getting a legitimate Windows.

Remember the followings while designing the form –

- i. The form must remain at the center of the page.
- ii. You need to use proper input type for the mentioned fields.
- iii. You need to put name attribute for all the fields.
- iv. The border color for the form is #c3c3c3

b)	<p>Develop the button with hover effects with necessary HTML and CSS.</p> <ul style="list-style-type: none"> <li>i. The padding of the button is 20px in top-bottom and 40px in left-right</li> <li>ii. The transition should take 0.2 seconds with ease-in-out animation effect.</li> </ul> <table border="1" data-bbox="119 253 526 369"> <tr> <td data-bbox="119 253 526 369" style="text-align: center; padding: 10px;">GET REGISTERED</td> </tr> </table> <p>Without Hover</p> <table border="1" data-bbox="631 253 1031 369"> <tr> <td data-bbox="631 253 1031 369" style="text-align: center; background-color: black; color: white; padding: 10px;">GET REGISTERED</td> </tr> </table> <p>With Hover</p>	GET REGISTERED	GET REGISTERED	[Marks-3]	
GET REGISTERED					
GET REGISTERED					
	<p>Demonstrate your understanding of the code below by writing the output for the following JavaScript Code.</p> <pre>let index = 10;  for(let i = 1; i &lt; index; i++){     if(index % i != 0){         console.log(i);     } }</pre>	[Marks-5]	CLO-3 Level-2		

**Daffodil International University**  
**Department of Software Engineering**

**Course Code:** SE321  
**Section:** A

**Course Title:** Software Engineering Web Application  
**Duration:** 30 Minutes

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1. Describe “Network Intensive” and “Continuous Evolution” attributes of a web application. [Marks 5]
  2. Some URL that you are visiting contains one HTML file and the file has 6 images attached to it. The browser you are using is a latest version of Google Chrome that uses HTTP/1.0. It takes 1ms for a request to travel from browser to the server and the 1ms for the response to be received by the browser. It takes 0.3ms for transmitting 2MB of data over the network. Each image size is 6MB and the size of the HTML file is 1MB. Now calculate the time for loading the full page in the browser. [Marks 5]
  3. Discuss the four types of messages in HTTP protocol. [Marks 5]



Daffodil International University

**Department of Software Engineering**

**Faculty of Science & Information Technology**

**Midterm Examination , Spring 2023**

**Course Code: SE 442/ SWE 412, Course Title: Management Information System**

**Level: 2 Term: 2 Section: A**

**Instructor: IM**

**Date: 12.03.2023 Time: 11:30 -1:00**

**Duration: 1:30 Hrs Marks: 25**

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Netflix is a subscription-based streaming service that allows our members to watch TV shows and movies on an internet-connected device. Depending on your plan, you can also download TV shows and movies to your iOS, Android, or Windows 10 device and watch without an internet connection. Netflix content varies by region and may change over time. You can watch a variety of award-winning Netflix originals, TV shows, movies, documentaries, and more. You can watch Netflix through any internet-connected device that offers the Netflix app, including smart TVs, game consoles, streaming media players, set-top boxes, smartphones, and tablets. You can also watch Netflix on your computer using an internet browser. You can review the system requirements for web browser compatibility, and check our internet speed recommendations to achieve the best performance. Each Netflix plan determines the number of devices you can watch Netflix on at the same time and whether you can watch in High Definition (HD), Full High Definition (FHD), or Ultra High Definition (UHD).

1. Construct Business Model Canvas for **Netflix**. [5] [CLO 2, Level 3]
2. Develop a digital dashboard with relevant data from **Netflix** . [5] [CLO 2, Level 3]
3. Apply the concept of Usability (SUS) **Netflix** with example. [5] [CLO 1, Level 2]

SUS questionnaire:

- I think that I would like to use this system frequently.
- I found the system unnecessarily complex.
- I thought the system was easy to use.
- I think that I would need the support of a technical person to be able to use this system.
- I found the various functions in this system were well integrated.
- I thought there was too much inconsistency in this system.
- I would imagine that most people would learn to use this system very quickly.
- I found the system very cumbersome to use.
- I felt very confident using the system.
- I needed to learn a lot of things before I could get going with this system.

4. Show TPS , MIS, DSS and ESS services for **Netflix** (**Production/Service sector only**). [5] [CLO 1, Level 1 ]
5. Identify how time series and linear regression can support **Netflix**. [5][CLO 2, Level 3]

*Yemane*



# Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Midterm Examination, Spring 2023

Course Code: SE333; Course Title: Software Engineering

Sections: A, B & Teachers: NF

Time: 1:30 Hrs

Marks: 25

1. Demonstrate your **understanding** of the A\* Search algorithm by preparing a problem statement where it can be applied. **Analyze** the problem statement and express it with a graphical representation. Explain the heuristic function you used in your solution, specify the information that guides the AI agent to discover the closest node to the goal, and use your creativity to express everything impressively in your exam script. [CLO-1, Level 4, Marks - 15]
  
2. **Apply** the stack and queue data structure concept to develop DFS and BFS algorithms. Write down the algorithm using pseudocode. Apply your **creativity** to demonstrate that DFS and BFS can be expressed using the same pseudocode, and changing the data structure modifies their behavior. [CLO-2, Level 6, Marks - 10]



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Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Quiz 1, Spring 2023, Instructor: Debabrata Mallick (DM), Section: A

Course Code: SE441; Course Title: Software Engineering & Professional Ethics

Course Code: SE413; Course Title: Software Engineering & Cyber Laws

Time: 30 Minutes

Marks: 15

**Question 1: Multiple choice. (7)**

1. Which of the following is an example of using a computer to harm other people?
  - a) Developing a new social media platform
  - b) Hacking into someone's email account without their permission
  - c) Creating a new app to help people manage their finances
  - d) Writing a blog post criticizing a political figure
2. Which of the following is an example of interfering with other people's computer work?
  - a) Helping a coworker troubleshoot a computer problem
  - b) Unplugging a colleague's computer while they are away from their desk as a practical joke
  - c) Collaborating with a team to develop a new software product
  - d) Sharing a document with a colleague to review and provide feedback
3. Which of the following is an example of snooping around in other people's computer files?
  - a) Accessing a shared folder to find a document you need for a project
  - b) Using a colleague's computer with their permission to check your email
  - c) Using a coworker's computer without their permission to access their personal files
  - d) Reviewing a coworker's work that they have shared with you

4. Which of the following is an example of using a computer to steal?
  - a) Developing a new e-commerce platform to sell handmade crafts
  - b) Hacking into a company's database to steal customer information
  - c) Creating a new mobile game that people can purchase for a small fee
  - d) Writing a blog post about how to save money on groceries
5. Which of the following is an example of using a computer to bear false witness?
  - a) Sharing an article from a reputable news source about a recent scientific discovery
  - b) Posting a fake news article on social media about a political candidate
  - c) Writing an online review of a product you purchased that accurately reflects your experience
  - d) Posting a meme on social media that satirizes a current event
6. Which of the following is an example of copying or using proprietary software for which you have not paid?
  - a) Downloading and using a free, open-source video editing software
  - b) Using a software program at work that your employer has purchased a license for
  - c) Copying a friend's copy of Microsoft Office and using it on your personal computer
  - d) Purchasing a legitimate license for a software program that you use regularly
7. Which of the following is an example of using other people's computer resources without authorization?
  - a) Using a shared printer in your office to print out a document for a meeting
  - b) Logging onto a coworker's computer with their permission to access a file
  - c) Using your company's server to host a personal website without permission
  - d) Installing a software program on your work computer that your employer has approved

**Question 2:** What is code of ethics? Write two codes of ethics for computer professionals and users the general. (3)

**Question 3:** Write some definition Computer ethics, Moral, Freeware software, Software piracy. (3)

**Question 4:** Write two Do's and Don't ethical for the ethics culture of the computer professional. (2)



**Daffodil International University  
Department of Software Engineering  
Faculty of Science & Information Technology**

**Quiz 2, Spring 2023, Instructor: Debabrata Mallick (DM), Section: A  
Course Code: SE441; Course Title: Software Engineering & Professional Ethics  
Course Code: SE413; Course Title: Software Engineering & Cyber Laws  
Time: 30 Minutes**

**Marks: 15**

**Case 1:**

You are a software tester, and you have not yet performed thorough testing of the software that the development team has built. However, your boss reminds you that the software must be released to the client tomorrow. He then tells you that he believes you have tested the software enough and that you should therefore sign on the approval sheet.

**Question 1:** Would you sign the approval sheet? Identify the pertinent clauses in the ACM/IEEE Software Engineering Code of Ethics that can help you make an ethical decision on this issue and give proper explanation for that?

**6 Marks**

**Question 1:** What is the Software engineer's code of ethics? Write Eight principles short version of the ACM/IEEE software engineering code of ethics.

**9 Marks**



Daffodil International University

## Department of Software Engineering

### Faculty of Science & Information Technology

Mid-Term Examination, Spring 2023 @ Daffodil Smart City

Course Code: SE441, Course Title: Software Engineering and Professional Ethics

Level: 4; Term: 2; Section: A; Instructor: DM; Modality: Written Exam

Date: 21 March 2023; Time: 9 AM – 10:30 AM (Slot-A)

One hour thirty minutes (1:30 hrs); Case study-based assessment; Marks: 25

Directions:

- Students need to go through the CASE STUDY shown in this exam paper.
- Texts in square brackets indicate Course Learning Outcomes and Bloom's Taxonomy Level

Case: (Answer question Q2 based on this case)

**Part 1:** As a software developer or engineer, it's crucial to ensure that the specifications for the software you're working on have been well-documented, meet the users' requirements, and have the necessary approvals. Here are some steps you can take to accomplish this: Understand the user requirements, Document the specifications, Review and validate the specifications, and obtain the appropriate approvals.

**Part 2:** In our system, when a particular user is viewing the details, it would be much better if his/her name was also shown. We could use the list of names and assign the names to the relevant index numbers. But to maintain human values, we had to temper this technical judgment. Because if the name is shown, any user can find out the results of some other student by trying various index numbers until he finally finds the name. But sometimes, the students may not want to share their results with others. So to maintain this human value, we had to remove the feature of showing the name.

1.	A) Explain all professional responsibilities and liabilities.	Marks: 3 [CLO 1 Level 2]
	B) Compare your behavior with office colleagues to maintain professionalism?	Marks: 3 [CLO 1 Level 2]
	C) Show all the Ten Commandments explanations with examples.	Marks: 5 [CLO 1 Level 2]
2.	A) From the above case study, Part 1, identify the name & definition of the ACM/IEEE software engineering code of ethics and provide five explanations of them.	Marks: 4 [CLO 2 Level 2]
	B) From the above case study, Part 2, identify the name & definition of the ACM/IEEE software engineering code of ethics and make use of the ACM/IEEE software engineering code of ethics will help you to make an ethical decision.	Marks: 5 [CLO 2 Level 3]
3.	A) Justify what is acting consistently with the public interest, and explain how?	Marks: 3 [CLO 3 Level 5]
	B) Discover what ethics do engineers have to advance the integrity and reputation of the profession in a way that is consistent with the public interest?	Marks: 2 [CLO 3 Level 4]