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# RajivGandhiUniversityofKnowledgeTechnologies
## (Department of ComputerScience Engineering)
## Mid-2

**Year/Sem:E2-SEM2**
**Subject: Web Technologies**
**SubjectCode:2 0 C S 2 2 0 3**

**Date:22-07-2022**
**Time:2hrs.**
**Max. Marks: 40Marks**

**Answerany FOUR questions. Each question CarriesTEN marks.(4X 10 = 40Marks)**
**Note: Write examples to each attempted question.**

1) Write the difference between (write example also): (5X2=10M)
   a) Undefined and undeclared variables in java script.
   b) var and let keyword.
   c) innerHTML and htm()
   d) for..of and for..in loops.
   e) Java and java script.

2) Write a program to access all "p" elements in the web page and modify the content to "Mid2 Question Paper" with your own styling using Java script and jQuery. (5+5)M

3) A) List and explain five predefined functions? 5M
   B) Write an html program to take age as input and when the user clicks on submit button, define age is either less than 10 , between 11 and 50, between 51 and 100 , between 101 and 200 or "not valid" using java script user defined functions and switch statement (No need to write validations)?5M

4) A) Is Java script statically or dynamically typed language? Justify.
   B) Assume b.js, c.js and d.js exists. Will the following code provide error? Justify.

```
<!DOCTYPE html>
<html>
<body>
    <script type="text/javascript" src="b.js"></script>
    CSE Mid 2 question paper
    <script type="text/javascript" src="c.js"></script>
    RGUKT Nuzvid
    <script type="text/javascript" src="d.js"></script>
</body>
</html>
```

   C) How can you add a jQuery Library to your project?
   D) Write a short note onready() in jQuery?
   E) Write the advantages of addEventListener() method?

5) Write about Events in jQuery with an example program using on() action. (6+4M)

6) Write about jquery Effects with an example program? (10M)

7) Write a java script program to sort the array of strings and numbers? (5+5)M
   Example: If, input: 51,42, 153. Output: 42, 51,153
   If, input: cse, ece,civil. Output: civil,cse,ece

8) Implement the given web page with the given requirements.

Name:

Password:

Re enter password:

Password not matched

Phone number:

Submit

a) Name should be valid mail id ( Assume valid means extended with @gmail.com only)
b) Password and Reenter password should be same.
c) Phone number should be valid phone number (10 digits only and first digit should be either 7 or 8 or 9)
d) On leaving any field, show whether entered data is valid or not as shown in the image.

***END of Paper – All the best***

# Rajiv Gandhi University of Knowledge Technologies

## (Department of Computer Science & Engineering)

### MID TEST – 1 (A.Y. 2021-2022)

Year/Sem:E2-SEM2
Subject: Data Science with Python
Subject Code: 20CS2202

Date: 22-07-2022
Time:
Max. : 40 Marks

Answer any FOUR questions. (4 X 10 = 40 M)

1. Write the importance of "Data Science" in today's world
2. Explain the NumPy library in python its methods and usages with examples
3. What is a DataFrame, write its methods and usages with examples
4. What is ANOVA? Explain with use case
5. What is a Model, explain SimpleLinearRegression and MultipleLinear Regression in a pythonic way
6. For the dataset given below, get the following answers,
   a. What was the maximum temperature in each of these 3 cities?
   b. What was the average wind speed in each of these 3 cities?

**Data for Question 6**

*Figure 1Data for Question 6*

| | day | city | temperature | windspeed | event |
|---|---|---|---|---|---|
| 0 | 1/1/2017 | new york | 32 | 6 | Rain |
| 1 | 1/2/2017 | new york | 36 | 7 | Sunny |
| 2 | 1/3/2017 | new york | 28 | 12 | Snow |
| 3 | 1/4/2017 | new york | 33 | 7 | Sunny |
| 4 | 1/1/2017 | mumbai | 90 | 5 | Sunny |
| 5 | 1/2/2017 | mumbai | 85 | 12 | Fog |
| 6 | 1/3/2017 | mumbai | 87 | 15 | Fog |
| 7 | 1/4/2017 | mumbai | 92 | 5 | Rain |
| 8 | 1/1/2017 | paris | 45 | 20 | Sunny |
| 9 | 1/2/2017 | paris | 50 | 13 | Cloudy |
| 10 | 1/3/2017 | paris | 54 | 8 | Cloudy |
| 11 | 1/4/2017 | paris | 42 | 10 | Cloudy |

7. From the URL https://en.wikipedia.org/wiki/Data_science extract all the headings

**Sample data**

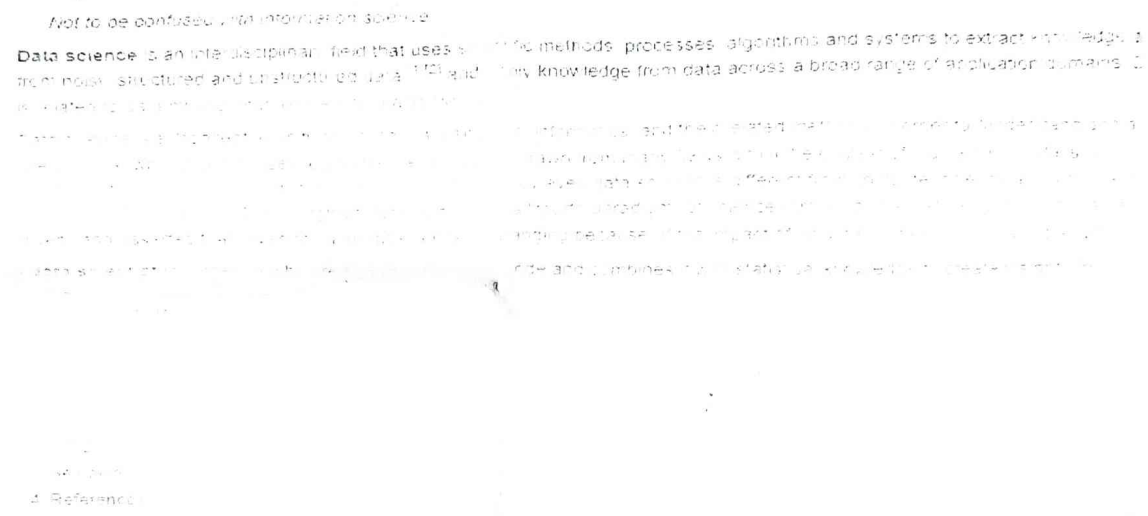


*Figure 2Data for Question 7*

8. For the given dataset find the following

After the exchange closes at 16:30:00 for each trading day print

a. Trading Day = <Date>
b. Last Quote Time = Time of the last quote received before 16:30:00>
c. Number of valid quotes received for the day

**Note: In the given sample data 1st line i.e 8 is the number of lines in a text file**

Row Schema:

| Date | Time | Symbol | Price |
|---|---|---|---|
| Date of the quote in YYYY-mm-dd format | Time of the quote in HH:MM:SS format | Stock Ticker for the instrument | Current price |

Sample input:

```
8
2017-01-03,16:18:50,AAPL,142.64
2017-01-03,16:25:22,AMD,13.86
2017-01-03,16:25:25,AAPL,141.64
2017-01-03,16:25:28,AMZN,845.61
2017-01-03,16:28:50,AAPL,140.64
2017-01-03,16:29:59,FB,140.34
2017-01-04,16:29:32,AAPL,143.64
2017-01-04,16:30:50,AAPL,141.64
```

CD

# Rajiv Gandhi University of Knowledge Technologies

## (Department of Computer Science Engineering)

Year/Sem: E2-SEM2
Subject: COMPILER DESIGN
Subject Code: CS2202

Date: 23-07-2022
Time: 120 Minutes
Max. Marks : 40 M

**Instructions:**

- **Answer any four questions out of eight.**
- **All subparts of the questions must be answered in continution**
- **Extra attempted questions won't be considered for evaluation.**

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**Answer Any Four out of Eight Questions.** **(4×10= 40 Marks).**

1. Consider the basic symbols needed to represent simple arithmetic operations. The terminals are {num, (, ), +, -, *, /, %, ^} and the operations are as follows (in decreasing order of precedence):

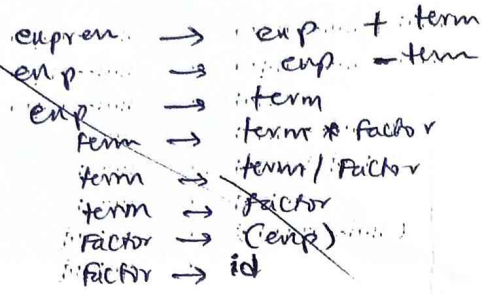
| Operator | Associativity |
|---|---|
| ^ | right |
| * /. % | left |
| +.- | left |

A restricted first attempt might be
E → E Op E | (E) | <num>
Op → + | * | ^
This grammar has a few problems: it is ambiguous, it does not enforce operator precedence, and it does not enforce associativity.
(a) Give an example to show that the grammar is ambiguous.
(b) Write an LR(1) grammar for the full problem domain, including all the operators in the table with the appropriate precedence relationships and associativity. You don't need to show parse tables.
(c) Show the bottom-up derivation of 4^5%2 + 1 * (2 + 2) using your grammar[in General way]

2. Write a Pseudo code for SLR parsing algorithm. And prove your pseudo code is producing the parse tree for the string w which is derivable from the grammar G

3. Write a summary on parsers includes both top down parsers and Bottom up parsers.
[**Strict Note:** Don't derive conclusions by taking one example, Don't explain the way how to construct DFA and parse tables]
**Summary must includes :** Your observations on parsers w.r.t time complexity, acceptance of more grammars, # entries in parse tables, comparisions among entries in parse tables, conflicts in parse tables, probability of getting conflicts and relation among parsers etc

4. Construct Non-Recursive Descent Parser for the following grammar




5. Consider the following grammar

X → Y0/ 1Y2 / 32 / 130
Y → 3

Check whether the grammar is SLR or CLR?

6. A) What is the FIRST set of the non-terminals in the syntax analysis phase of the given language? {S,A,B,C,X'} are the non-terminals; {(,),+,*,x} are the terminal symbols

S → ABC
A → ( X') | ε
B → A + X'
C → X' * B
X' → 0 | ε

B) What is FOLLOW set of the non-terminals of the grammar

S -> ABC | Aab | Bbc | Cca;
A -> CA | bb;
B -> a | ε;
C -> BC | ca | ε

7. A) What is the resultant grammar after removing left-factoring and left-recursion from the following grammar?

S → aA | abA | abcA | SeA | d
A → AB | fB | b | AaB
B → gb | ga | a

B) Write a pseudo code to find FIRST and FOLLOW constructs.

8. Given the grammar G, Construct LALR parse table for the given grammar.

S->AA;
S->b
A->Ba
A->a
B->b

# Rajiv Gandhi University of Knowledge Technologies

(Department of Computer Science and Engineering)

MID - II

Year/Sem:E2-SEM2

Subject: Computer Organization and Architecture

Date:21-07-2022

Max. Marks:40 Marks

## Answer any four questions(4 X 10)

1. Explain 8085/8086 architecture in detail?(10)

2. a) Explain various addressing modes in detail?(6)
   b) Explain instruction formats with example?(4)

3. Explain the flow chart for floating point arithmetic multiplication with example?(10)

4. a) Explain the Register organization in detail?(7)
   b) The register which contains the data to be written into or read out of the addressed location is called _____(1)
   c) The program counter(PC) is a _____(1)
   d) The Instruction Register (IR) is a _____(1)

5. a) Explain single bus processor organization with diagram?(5)
   b) Write execution of complete instruction for the following(5)
      i) ADD R1,X
      ii) ADD R1,R2

6. Explain the detailed organization and design of hardwired control unit?(10)

7. Explain detailed organization and design of microprogrammed control unit?(10)

8. a) Write the differences between static RAM and dynamic RAM?(4)
   b) Explain internal organization of memory chip and design 1024K X 32 RAM using 256K X 8 RAM?(6)