Practical File Questions

Q1. Write a program in C++ to create a link list implemented Stack.

Q2 Write a program in C++ to create a link list implemented queue.

Q3 Write a program in C++ to create an array implemented Linear Queue.

Q4 Write a program in C++ to create an array implemented circular Queue.

Q5 Write a program in C++ to create an array implemented Stack.

Q6 Write a function in C++ linear\_search() that receive three parameters i) an array of integer of ii) size of array iii) data to be search . Use linear search method to search “DATA” from this list and return 1 if “DATA” is available other wise 0. Also implement this function in a C++ program.

Q7 Write a function in C++ Binary\_search() that receive three parameters i) a Sorted array of integer in ascending order ii) size of array iii) data to be search . Use most efficient search method to search “DATA” from this list and return 1 if “DATA” is available other wise 0. Also implement this function in a C++ program.

Q8 Write a function in C++ bubble\_sort() that receive two parameters i) An array of integer ii) Size of array. Arrange this array in ascending order using bubble sort method. Also implement this function in a C++ program

Q9 Write a function in C++ selection\_sort() that receive two parameters i) An array of integer ii) Size of array. Arrange this array in ascending order using selection sort method. Also implement this function in a C++ program

Q10 Write a function in C++ insertion\_sort() that receive two parameters i) An array of integer ii) Size of array. Arrange this array in ascending order using insertion sort method. Also implement this function in a C++ program

Q11. Write a function in C++ Concate () that receive two arrays and their size as its parameters. Concatenate these two arrays to form a new array. Also implement this function in a C++ program

Q12. Write a function in C++ Merge() that receive two sorted arrays( arranged in ascending order ) and their size as its parameters. Merge these two arrays to form a new array arranged in ascending order. Also implement this function in a C++ program

Q13. Write a function in C++ upper\_triangle( ) that receive a double dimensional array as its parameter and print its upper triangular matrix on the screen. Also implement this function in a C++ program.

Q14. Write a function in C++ lower\_triangle( ) that receive a double dimensional array as its parameter and print its lower triangular matrix on the screen. Also implement this function in a C++ program.

Q15. Write a function in C++ diagonal\_matrix( ) that receive a double dimensional array as its parameter and print its diagonal matrix on the screen. Also implement this function in a C++ program.

Q16. Write a function in C++ Sum \_matrix( ) that receive two double dimensional array as its parameter and add them to form a new double dimensional matrix. Also implement this function in a C++ program.

Q17. Write a function in C++ Subtract \_matrix( ) that receive two double dimensional array as its parameter and subtract second matrix from first to form a new double dimensional matrix. Also implement this function in a C++ program.

Q18. Write a function in C++ Sum\_row ( ) that receive a double dimensional array as its parameter. Find out sum of each row and print them on the screen. Also implement this function in a C++ program.

Q19. Write a function in C++ Sum\_column ( ) that receive a double dimensional array as its parameter. Find out sum of each columns and print them on the screen. Also implement this function in a C++ program.

Q20. Write a function in C++ INSERT() that receive an array of integer ii) size of array iii) total filed locations and iv) position - a new value to be inserted v) value . Insert this value in the given array using shifting method. Also implement this function in a C++ program.

Q21 Write a function in C++ REMOVE() that receive i) an array of integer ii) size of array iii) total filed location iv) position to be deleted from array. Delete the given position element from array using shifting method. Also implement this function in a C++ program.

Q22 Define a class Student with the following specification

Private Members

Roll Number : integer

Name : String

Marks Obtained in 5 subject : integer

percentage : Integer

void calculate\_grade ( ) : Function to calculate percentage of marks obtained

Public :

Members( ) constructor function to initialize all the data em

Read\_data() : function to read all the data members from keyboard and invoke

calculate\_grade() function

show\_data( ) : function to show all the data members on the screen.

Also implement this class in a C++ program.

Q23 Define a class bank with the following specifications

Private members

Account number integer

Name 30 chars

Account type 1 chars ( c- current , s – saving )

balance integer

public members :

bank( ) : constructor function to initialize all the data members

withdraw ( ) : function to withdraw amount and reduce the balance

deposit ( ) : function to deposit amount and increase the balance

display( ) : function to show the data members

Also implement this function for 20 members

Q24 Write a program in C++ to create a text file name “ Story.txt”. Read the contents of this file and display contents as well as total number of chars available on this file on the screen.

Q25 Write a program in C++ to create a text file name “ Examination.txt” that contains some text . Find out the occurrence of word “is” in this file. Display the contents of this file and the occurrence of “ is” on the screen.

Q26 Write a program in C++ to create a text file name “ Examination.txt” that contains some text . Find out total number of lines present in this file. Display the contents of this file and total number of lines on the screen.

Q27. A class student with following specification is given to you

Class student { int roll;

Char name[40];

Public :

Void Read\_data( ) { cin>>roll; cin >>name ; }

Void Show\_data( ) { cout<<roll <<”\t”<<name <<endl; }

};

Write a program in C++ to write the objects of this class in a binary file “student.dat”. read the previously entered objects from binary file and display them on the screen;

Q27. A class student with following specification is given to you

Class student { int roll;

Char name[40];

Public :

Void Read\_data( ) { cin>>roll; cin >>name ; }

Void Show\_data( ) { cout<<roll <<”\t”<<name <<endl; }

int retroll( ) { return roll ; }

char \* retname() { return name; }

};

Write a program in C++ to write the objects of this class in a binary file “student.dat”. read the previously entered objects from binary file and display only those records whose roll number is more than 10 on the screen;

Mysql

Q1. Write SQL commands to perform the following operations

1. Create a Table of student with following specifications

|  |  |  |  |
| --- | --- | --- | --- |
| S.No | Field Name | Data Type –size | Constrainst |
| 1 | Admno | Numeric – 10 | Primary key |
| 2 | Name | Char – 30 |  |
| 3 | Stream | Char – 20 |  |
| 4 | Class | Char – 12 |  |
| 5 | Grade | Char -1 |  |
| 6 | Fees | Numeric 8,2 |  |

1. Write commands to insert 5 rows in this newly created table of student
2. Display all the records of student table.
3. Display stream wise total number of students in each stream
4. Display all the records of class -12 students whose stream is “ Science”

Q2. Write SQL commands to perform the following operations

1. Create a Table of **Employee** with following specifications

|  |  |  |  |
| --- | --- | --- | --- |
| S.No | Field Name | Data Type –size | Constrainst |
| 1 | EMPno | Numeric – 10 | Primary key |
| 2 | Name | Char – 30 |  |
| 3 | Department | Char – 20 |  |
| 4 | Gender | Char – 12 |  |
| 5 | Grade | Char -1 |  |
| 6 | Salary | Numeric 8,2 |  |

1. Write commands to insert 5 rows in this newly created table of Employee
2. Display all the records of Employee table.
3. Display Department wise total number of Employee in each Department
4. Display all the records of female employees of “Mechanical” department

Q3. Write SQL commands to perform the following operations

1. Create a Table of **Parts** with following specifications

|  |  |  |  |
| --- | --- | --- | --- |
| S.No | Field Name | Data Type –size | Constrainst |
| 1 | PartNo | Numeric – 10 | Primary key |
| 2 | PartName | Char – 30 |  |
| 3 | Dealer | Char – 20 |  |
| 4 | Qty | Numeric 4 |  |
| 5 | Price | Numeric 8,2 |  |

1. Write commands to insert 5 rows in this newly created table of parts
2. Display all the records of Parts table.
3. Display Dealer wise total qty of each parts in parts table.
4. Find out total price of all the parts in parts table.,

Boolean Algebra

Q1. Minimize the following expression using K-map

F(a,b,c,d) = (0,3,4,7,8,11,12,15)

Q2. Minimize the following expression using K-map

F(a,b,c,d) = (0,1,2,3,8,9,10,11)

Q3. Minimize the following expression using K-map

F(a,b,c,d) = (4,5,6,7,8,9)