ASSIGNMENT 8: STRUCTURE, UNION, ENUMERATIONS.

1. Rewrite the four-function calculator for complex numbers.

2. Declare a structure to store data for student information. The structure contains roll number, name, marks for students. Write a program to accept information of student from user and print the same.

3. Write a function to accept student information from the user. Write another function to print student's information. Re-use these functions in rest of the assignments wherever required.

4. Write a function to search student's information by roll number. Write another function to search student's information by name. (linear search)

5. Write a function to sort array of student's information by roll number. Write another function to sort student's information by name.

6. The structure student should contain date of birth (Nested structure). Modify all above programs using modified student structure. Sort the array on date of birth.

7. Write a structure to store school student information. The student result is one of the members of this information. Note that till 4^{th} standard school follows grade scheme (A / B / C) and after 4^{th} standard it follows percentage pattern. Accept the information of 3 students from the user and display it again. (use union to store grade and percentage)

8. Using union determine the determine endian ness on your machine..

9. Write a program to accept date from user and return the date in form of a bit fields of a structure. Write another function to print the given date.
   Use 5 bits for day.
   4 bits for month and
   Use remaining bits for year.

10. Write a function to Calculate day of week for given date. Use date structure from above question.

11. Write a menu driven code to implement stack, using array. Use enumerated constants in switch case.

12. Write a menu driven code to implement queue, using array. Use enumerated constants in switch case.

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- Using union write a function to print bit pattern of a floating point number. Your code should run on both little endian and big endian machines.