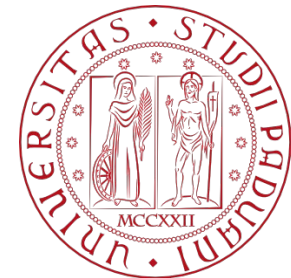


COMPUTER ENGINEERING LABORATORY

Luigi Rizzo

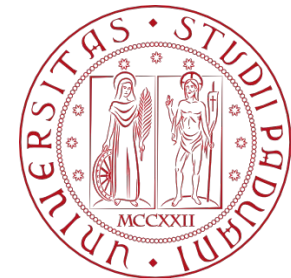
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Lab exercises



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Switch case / ternary operator



Write a C program to input a number and check positive negative or zero using switch case and ternary operator. Checking positive negative or zero using switch case and ternary operator is not recommended way, it's just for learning.

Example

Input:

Input number: 53

Output:

53 is positive

Write a C program to create menu driven calculator that performs basic arithmetic operations (add, subtract, multiply and divide) using switch case and functions. The calculator should input two numbers and an operator from user. It should perform operation according to the operator entered and must take input in given format.

<number 1> <operator> <number 2>

Example

Input: 8.5 – 5

Output: 3.5

Write a C program to create menu driven calculator that performs basic arithmetic operations (add, subtract, multiply and divide) using switch case and functions. The calculator should input two numbers and an operator from user. It should perform operation according to the operator entered and must take input in given format.

<number 1> <operator> <number 2>

Example

Input: 8.5 – 5

Output: 3.5

Write a C program to create a list of cars considering the following example data. Create a first list inserting cars at the beginning of the list and print the list, then create a second list inserting cars at the end of the list and print the list and finally create a third list inserting cars in ascending order of power and print the list.

```
const char* carsList[] = {  
    "Toyota ABC4123 2005 1800",  
    "Ford XYZ1789 1992 2700",  
    "Honda USA2456 2018 1400",  
    "Chevrolet LIBERTY 1986 3600",  
    "Volkswagen 4EVERUSA 2008 1100",  
    "Nissan NYC5555 1997 4900",  
    "BMW LA1DREAM 2010 2100",  
    "Mercedes-Benz 1STPLACE 1985 3000",  
    "Audi TEXAS123 2015 4200",  
    "Tesla MIAMI305 1990 1500"  
};
```

Write a function for the oneway linked list of cars which swaps two elements.

```
void swap(char * carName1, char *carName2, struct carList **head);
```

What about sorting the list in ascending order of power or in descending order of registration year?

Problem: Recording and Retrieving Golf Scores

In recording scores for a golf tournament, we enter the name and score of the player as the player finishes. This information is to be retrieved in each of the following ways:

- Scores and names can be printed in order by ascending or by descending scores.
- Given the name of a player, other players with the same score shall be printed.

We enter the name and score of the player as the player finishes another tournament. Sort the list in descending order of scores.