

(STRING PROBLEMS)
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(BSCS IST SS1)

PROBLEM 12.1

Write a program that displays the value stored in a string variable name.

```
#include <iostream>

using namespace std;

int main(){

    char name[]="OOP USING c++";

    cout<<"Name is "<<name<<endl;

    return 0;

}
```

(CIN OBJECT)

PROBLEM 12.2

Write a program that inputs the name of the user using cin object and displays it.

```
#include <iostream>

using namespace std;

int main(){

    char name[50];

    cout<<"Enter your name : "<<endl;

    cin>>name;

    cout<<"Your name is: "<<name<<endl;

    return 0;

}
```

(CIN.GETLINE FUNCTION)

PROBLEM 12.3

Write a program that inputs the name of the user using `cin.getline` function and displays it.

```
#include <iostream>

using namespace std;

int main(){

    char name[50];

    cout<<"Enter your name : "<<endl;

    cin.getline(name,50);

    cout<<"Your name is: "<<name<<endl;

    return 0;

}
```

(CIN.GET FUNCTION)

PROBLEM 12.4

Write a program that inputs the character of the user using `cin.get` function and displays it.

```
#include <iostream>

using namespace std;

int main(){

    char name;

    cout<<"Enter your name : "<<endl;

    cin.get(name);

    cout<<"Your name is: "<<name<<endl;

    return 0;

}
```

PROBLEM 12.5

Write a program that inputs the string from the user using `cin.get` function and displays length of it.

```

#include <iostream>

using namespace std;

int main(){

    char str[50];

    cout<<"Enter your string : "<<endl;

    cin.getline(str,50);

    int i=0;

    while(str[i] !='\0')

        i++;

    cout<<"Length of the string is: "<<i<<endl;

    return 0;

}

```

PROBLEM 12.6

Write a program that inputs the string from the user and copies it to another string.

```

#include <iostream>

using namespace std;

int main(){

    char str1[50],str2[50];

    cout<<"Enter your string : "<<endl;

    cin.getline(str1,50);

    int i=0;

    while(str1[i] !='\0'){

        str2[i]=str1[i];

        i++;

    }
}

```

```

    str2[i] = '\0';

    cout<< " The 1st string is: "<<str1<<endl;

    cout<< " The 2nd string is: "<<str2<<endl;


    return 0;

}

```

PROBLEM 12.7

Write a program that inputs the string from the user and counts vowels letter from it.

```

#include <iostream>

using namespace std;

int main(){

    char str[50];

    cout<<"Enter your string :"<<endl;

    cin.getline(str,50);

    int i,v;

    i= v=0;

    while(str[i] !='\0'){

        switch (str[i]){

            case 'a':

            case 'e':

            case 'i':

            case 'o':

            case 'u':

                v++;

        }

        i++;
    }
}

```

```

}

cout<<"The string has "<<v<<" vowels letters:"<<endl;

    return 0;

}

```

PROBLEM 12.8

Write a program that inputs a sentence and displays the number of uppercase and lowercase consonants, uppercase and lowercase vowels in sentence.

```

#include <iostream>

using namespace std;

int main(){

    char str[50];

    cout<<"Enter your string : "<<endl;

    cin.getline(str,50);

    int i,lv,uv,uc,lc;

    i=lv=uv=uc=lc=0;

    while(str[i] !='\0'){

        if (str[i]=='a' || str[i]=='e' || str[i]=='i' || str[i]=='o' || str[i]=='u' )

            lv++;

        else if (str[i]=='A' || str[i]=='E' || str[i]=='I' || str[i]=='O' || str[i]=='U' )

            uv++;

        else if (str[i]>65 && str[i]<=90)

            uc++;

        else if (str[i]>97 && str[i]<=122)

            lc++;

        i++;

    }
}

```

```

cout<<"The string has "<<lv<<" lowercase vowels letters:"<<endl;

cout<<"The string has "<<uv<<" uppercase vowels letters:"<<endl;

cout<<"The string has "<<uc<<" uppercase letters:"<<endl;

cout<<"The string has "<<lc<<" lowercase letters:"<<endl;

    return 0;

}

```

PROBLEM 12.9

Write a program that inputs first name and second name in two strings, concatenate both strings in third string and then displays it.

```

#include <iostream>

using namespace std;

int main(){

    char name1[30],name2[30],full[60];

    cout<<"Enter your 1st name :"<<endl;

    cin>>name1;

    cout<<"Enter your 2nd name :"<<endl;

    cin>>name2;

    int i=0;

    int j=0;

    while(name1[i] !='\0'){

        full[i]=name1[i];

        i++;

    }

    full[i++]=' ';

    while(name2[j] !='\0'){

        full[i]=name2[j];

```

```

        i++;

        j++;

    }

    full[i] = '\0';

    cout<<"Your first name is: "<<name1<<endl;

    cout<<"Your 2nd name is: "<<name2<<endl;

    cout<<"Your full name is: "<<full<<endl;


    return 0;

}

```

PROBLEM 12.10

Write a program that inputs name of five cities and displays them.

```

#include <iostream>

using namespace std;

int main(){

    char city[5][50];

    for (int i=0;i<5; i++){

        cout<<"Enter city name: "<<endl;

        cin>>city[i];

    }

    for (int i=0;i<5; i++){

        cout<<"Entered city names are : "<<city[i]<<endl;

    }

    return 0;

}

```

PROBLEM 12.11

Write a program that inputs name of five cities and displays them who starts with vowels letter.

```
#include <iostream>

using namespace std;

int main(){

    char city[5][30],ch;

    for (int i=0;i<5; i++){

        cout<<"Enter city name: "<<endl;

        cin>>city[i];

    }

    for (int i=0;i<5; i++){

        ch=city[i][0];

        switch(ch){

            case 'a':

            case 'e':

            case 'i':

            case 'o':

            case 'u':

                cout<<"Entered city names are : "<<city[i]<<endl;

        }

    }

    return 0;

}
```

(STRCAT)

```
#include <iostream>
```



```

#include <string.h>

using namespace std;

int main(){

    char str1[50]="The more you work..";

    char str2[50]="The more you gain..";

    cout<<"String 1:";

    puts(str1);

    cout<<"String 2:";

    puts(str2);

    cout<<"Concatating the strings:"<<endl;

    strcat(str1,str2);

    cout<<"  String 1 after Concating:"<<endl;

    puts(str1);


    return 0;

}

```

(STRCHR)

```

#include <iostream>

#include <string.h>

using namespace std;

int main(){

    char str1[50]="The more you work..";

    char *res,ch;

    cout<<"Enter any character to search:";

    cin>>ch;

    cout<<"looking for "<<ch<<" in the string"<<endl;

```

```
res=strchr(str1,ch);  
  
if (res==NULL)  
    cout<<"ch is not found:"<<endl;  
else  
    cout<<ch <<" is found in the string at index "<<res-str1<<endl;  
    return 0;  
}
```