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```

1. Write a C program to find the sum of all the elements of an array.
(Using Dynamic Memory Allocation)

OWNER: AKSHAY GANGARAM KADAM
BATCH: PPA9

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```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
```

```
void main()
{
    int *p,i,sum=0,n;
    printf("enter your array size");
    scanf("%d",&n);

    p=(int*)malloc(n*sizeof(int));

    printf("enter your array element");

    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

    for(i=0;i<n;i++)
    {
        sum=sum+*(p+i);
    }
    printf("the sum of all array element are=%d",sum);
}
```

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- Q 2. Write a C program to accept string with multiple spaces from user and print as it is. (Using Dynamic Memory Allocation)

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```

```
#include <stdio.h>
#include<conio.h>
#include<stdlib.h>
```

```

void main()
{
char *p,ch;
int i=0,number=1;
p=(char*)malloc(sizeof(char));
*(p+0]='\0';    /*p='\0';

printf("enter your string");

do{
scanf("%c",&ch);
if(ch!='\n')
{
number++;
p=(char*)realloc(p,number*sizeof(char));
*(p+i)=ch;
*(p+i+1]='\0';
i++;
}
}
while(ch!='\n');
i=0;

while(*(p+i]!='\0')
{

printf("%c",*(p+i));

i++;
}

getch();
}

```

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Q 3: Write a C program to accept string with multiple spaces from user and print it with a single space as a delimiter. (Using Dynamic Memory Allocation)

Eg:

Input String:

_____India_____is_my_____country_____

Output String:

India_is_my_country (Consider _ as space)

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```

#include <stdio.h>

```

```

#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,ch;
    int i=0,number=1;
    p=(char*)malloc(sizeof(char));
    *(p+0)='\0';    /*p='\0';

    printf("enter your string");

do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        p=(char*)realloc(p,number*sizeof(char));
        *(p+i)=ch;
        *(p+i+1)='\0';
        i++;
    }
}
while(ch!='\n');
i=0;

while(*(p+i)!='\0')
{
    while(*(p+i)==' ')
    {
        i++;
    }

    while(*(p+i)!='\0' && *(p+i)!=' ')
    {
        printf("%c",*(p+i));
        i++;
    }

    printf(" ");

}

    getch();
}

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4. Write a C program that return the positions of the pallindrome element in array (Using Dynamic Memory Allocation)

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```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
```

```
void main()
{
    int *p,i,n,temp=0,rev=0,rem=0;
    printf("enter your array size");
    scanf("%d",&n);

    p=(int*)malloc(n*sizeof(int));

    printf("enter your array element");

    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

    for(i=0;i<n;i++)
    {
        temp=*(p+i);
        rev=0;
        while(*(p+i)>0)
        {
            rem=*(p+i)%10;
            rev=rev*10+rem;
            *(p+i)=*(p+i)/10;
        }
        if(temp==rev)
        {
            printf("the positions of the pallindrome element = %d\n",i);
        }
    }
}
```

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//Q 5. Write a C program to sort first half of array in ascending order and
// second half of array in descending order. (Using Dynamic Memory

```

// Allocation)
*****/

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    int *p,*q,i,temp=0,n,j,m;
    printf("enter your array size");
    scanf("%d",&n);

    p=(int*)malloc(n*sizeof(int));
    q=(int*)malloc(n*sizeof(int));

    printf("enter your array element");

    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
    for(i=0;i<n;i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(*(p+i)>*(p+j))
            {
                temp=*(p+i);
                *(p+i)=*(p+j);
                *(p+j)=temp;
            }
        }
    }

    m=(n/2)-1;
    for(i=0,j=0;i<=m;i++,j++)
    {
        *(q+j)=*(p+i);
    }
    printf("%d\n",j);

    for(i=n-1;i>m;i--)
    {
        *(q+j)=*(p+i);
        j++;
    }
}

```

```

        for(i=0;i<n;i++)
        {
            printf("%d\t",*(q+i));
        }
        free(p);
        free(q);
        getch();
    }

    for(i=n-1;i>m;i--)
    {
        *(q+j)=*(p+i);
        j++;
    }

```

```

        for(i=0;i<n;i++)
        {
            printf("%d\t",*(q+i));
        }
        free(p);
        free(q);
        getch();
    }

```

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 6. Write a C program to print count of number characters in given string.
 (Using Dynamic Memory Allocation)

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```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,ch;
    int i=0,number=1,total=0;
    p=(char*)malloc(sizeof(char));
    *(p+0]='\0';    /*p='\0';

    printf("enter your string");

    do{

```

```

scanf("%c",&ch);
if(ch!='\n')
{
    number++;
    p=(char*)realloc(p,number*sizeof(char));
    *(p+i)=ch;
    *(p+i+1]='\0';
    i++;
}
}
while(ch!='\n');
i=0;

while(*(p+i]!='\0')
{
    i++;
    total++;
}

printf("%d",total);

getch();
}

```

/*****
 Q 7. Write a C program to accept string and print it in the reverse order. (Using
 Dynamic Memory Allocation)
 Eg:
 Input String: India is my country
 Output String: yrtnuoc ym si aidnI

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```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,ch;
    int i=0,number=1,total=0;
    p=(char*)malloc(sizeof(char));
    *(p+0]='\0';    /*p='\0';

    printf("enter your string");

```

```

do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        p=(char*)realloc(p,number*sizeof(char));
        *(p+i)=ch;
        *(p+i+1]='\0';
        i++;
    }
}
while(ch!='\n');
i=0;

    while(*(p+i]!='\0')
    {
        i++;
        total++;
    }
    i=total;

    while(i>=0)
    {
        printf("%c",*(p+i));
        i--;
    }

    getch();
}

```

/*****
 8. Write a C program to copy the elements of one array into another
 array. (Using Dynamic Memory Allocation)

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*****/

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

```



```

void main()
{
    int *p,*q,i,n,j;
    printf("enter your array size");
    scanf("%d",&n);

    p=(int*)malloc(n*sizeof(int));
    q=(int*)malloc(n*sizeof(int));

    printf("enter your array element");

    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

    for(i=0,j=0;i<n;i++,j++)
    {
        *(q+j)=*(p+i);
    }

    for(i=0;i<n;i++)
    {
        printf("%d\t",*(q+i));
    }
    free(p);
    free(q);
    getch();
}

```

/*****
 Q 9. Write a C program to count count of number of vowels and number of
 consonants in the given string. (Using Dynamic Memory Allocation)

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*****/

```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,ch;
    int i=0,number=1,vo=0,co=0;
    p=(char*)malloc(sizeof(char));

```

```

*(p+0)='\0';    /*p='\0';

printf("enter your string");

do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        p=(char*)realloc(p,number*sizeof(char));
        *(p+i)=ch;
        *(p+i+1]='\0';
        i++;
    }
}
while(ch!='\n');
i=0;

while(*(p+i]!='\0')
{
    if(*(p+i)!=' ')
    {
        if(*(p+i)=='a' || *(p+i)=='e' || *(p+i)=='i' || *(p+i)=='o' || *(p+i)=='u' || *(p+i)=='A' || *(p+i)=='E' || *(p+i)=='I' || *(p+i)=='O' || *(p+i)=='U')
        {
            vo++;
        }
        else
        {
            co++;
        }
        i++;
    }
}
printf(" total number of vowels in string: %d\n",vo);
printf(" and total number of consonants in string : %d ",co);

getch();
}

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Q 10. Write a C program to reverse a given string as below. (Using Dynamic Memory Allocation)

Eg:

Input String: India is my country

Output String: aidnI si ym yrtnuoc

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```
#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,ch;
    int i=0,temp=0,number=1;
    p=(char*)malloc(sizeof(char));
    *(p+0]='\0';    /*p='\0';

    printf("enter your string");

do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        p=(char*)realloc(p,number*sizeof(char));
        *(p+i)=ch;
        *(p+i+1]='\0';
        i++;
    }
}
while(ch!='\n');
i=0;

while(*(p+i]!='\0')
{
    while(*(p+i)!=' ' && *(p+i]!='\0')
    {
        i++;
    }

    temp=i-1;

    while(temp>=0 && *(p+temp)!=' ')
```

```

    {
        printf("%c",*(p+temp));
        temp--;
    }

    if(*(p+i)==' ')
    {
        printf("%c",' ');
    }

    i++;
}
getch();
}

```

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/*****
11. Write a C program to sort only even numbers in given array.
(Using Dynamic Memory Allocation)
Eg.
Input: 45 8 75 29 5 49 56 22 14 497 288 18 2
Output: 45 2 75 29 5 49 8 14 18 497 22 56 288
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*****/

```

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    int *p,*q,*r,i,temp=0,n,j,m,k=0;
    printf("enter your array size");
    scanf("%d",&n);

    p=(int*)malloc(n*sizeof(int));
    q=(int*)malloc(n*sizeof(int));
    r=(int*)malloc(n*sizeof(int));

    printf("enter your array element");

    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
}

```

```

    }
    j=0;
    for(i=0;i<n;i++)
    {
        if(*(p+i)%2==0)
        {
            *(q+j)=*(p+i);
            j++;
        }
    }
    m=j;
    for(i=0;i<m;i++)
    {
        for(k=i+1;k<m;k++)
        {
            if(*(q+i)>*(q+k))
            {
                temp=*(q+i);
                *(q+i)=*(q+k);
                *(q+k)=temp;
            }
        }
    }
    j=0;
    k=0;
    for(i=0;i<n;i++)
    {
        if(*(p+i)%2==0)
        {
            *(r+j)=*(q+k);
            k++;
            j++;
        }
        else
        {
            *(r+j)=*(p+i);
            j++;
        }
    }
    for(i=0;i<n;i++)
    {
        printf("%d",*(r+i));
    }

    free(p);
    free(q);
    free(r);
    getch();
}

```

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Q12. Write a C program to replace space with '\$' in given string. (Using Dynamic Memory Allocation)

Eg:

Input String: India is my country

Output String: India\$is\$my\$coutry

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```
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```

```
#include <stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

```
char *p,ch;
```

```
int i=0,temp=0,number=1;
```

```
p=(char*)malloc(sizeof(char));
```

```
*(p+0)='\0';    /*p='\0';
```

```
printf("enter your string");
```

```
do{
```

```
scanf("%c",&ch);
```

```
if(ch!='\n')
```

```
{
```

```
number++;
```

```
p=(char*)realloc(p,number*sizeof(char));
```

```
*(p+i)=ch;
```

```
*(p+i+1)='\0';
```

```
i++;
```

```
}
```

```
}
```

```
while(ch!='\n');
```

```
i=0;
```

```
while(*(p+i)!='\0')
```

```
{
```

```
if(*(p+i)==' ')
```

```

    {
        *(p+i)='$';
        i++;
    }
    else
    {
        *(p+i)=*(p+i);
        i++;
    }
}
printf("%s",p);

getch();
}

```

/*****
 13. Write a program in C to separate odd and even integers in
 same array. (Using Dynamic Memory Allocation)

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*****/

```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

```

```

void main()
{   int i,j,n,temp,m,*p;

    printf("enter your array size");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));
    printf("ENTER YOUR ARRAY ELEMENT");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
    m=n/2;

```

```

j=n-1;
i=0;

while(i<m)
{
    if(*(p+i)%2==0 && *(p+j)%2==0 )
    {
        i++;
    }

    else if(*(p+i)%2!=0 && *(p+j)%2==0 )
    {
        temp=*(p+i);
        *(p+i)=*(p+j);
        *(p+j)=temp;
        i++;
        j--;
    }

    else if(*(p+i)%2!=0 && *(p+j)%2!=0 )
    {
        j--;
    }

    else if(*(p+i)%2==0 && *(p+j)%2!=0 )
    {
        i++;
        j--;
    }

}

for(i=0;i<n;i++)
{
    printf("%d",*(p+i));
}

free(p);
getch();
}

```

/*****

Q14. Write a program which accept sentence from user and print number of words from that sentence.

Input String: India_is_my_country

Output: 4

Input String:
_____India_____is_____my_____country_____
(Consider _ as space)
Output: 4

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*****/

```
#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
char *p,ch;
int i=0,temp=0,number=1,total=0;
p=(char*)malloc(sizeof(char));
*(p+0]='\0';    /*p='\0';

printf("enter your string");

do{
scanf("%c",&ch);
if(ch!='\n')
{
number++;
p=(char*)realloc(p,number*sizeof(char));
*(p+i)=ch;
*(p+i+1]='\0';
i++;
}
}
while(ch!='\n');
i=0;

while(*(p+i]!='\0')
{
while(*(p+i)!=' ' && *(p+i]!='\0')
{
i++;
}

temp=i-1;

if(temp>=0 && *(p+temp)!=' ')
{
total++;
```

```

    }
    i++;

}
printf(" total word in string = %d",total);

getch();
}

```

```

/*****
Q 15. Write a program in C to print all unique elements in an array.
(Using Dynamic Memory Allocation)

```

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```

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```

```

#include<stdio.h>

```

```

#include<conio.h>

```

```

#include<stdlib.h>

```

```

void main()

```

```

{
    int i,n,j,*p,a;

    printf("ENTER ARRAY SIZE :");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));

    printf("ENTER ARRAY ELEMENT\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

```

```

for(i=0;i<n;i++)
{
    a=0;

    for(j=0;j<n;j++)
    {

        if(*(p+i)==*(p+j))
        {

```

```

        a++;
    }
}
if(a==1)
    printf("the unique number in array is= %d\n",*(p+i));
}
free(p);

    getch();

}

```

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Q 16. Write a C program to replace Good names in mail.

Eg:
 Raw String: Hello GoodName
 Input String: India
 Output String: Hello India
 Input String: Sangamner
 Output String: Hello Sangamner
 Input String: technOrbit
 Output String: Hello technOrbit

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*****/

```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,*q,*r,ch;
    int i=0,temp=0,number=1,total=0,j=0;
    p=(char*)malloc(sizeof(char));
    q=(char*)malloc(sizeof(char));
    r=(char*)malloc(sizeof(char));
    *(p+0]='\0';// *p='\0';
    *(q+0]='\0';

    printf("enter your main string ");

    do{
        scanf("%c",&ch);
        if(ch!='\n')

```

```

    {
        number++;
        q=(char*)realloc(p,number*sizeof(char));
        *(q+i)=ch;
        *(q+i+1)='\0';
        i++;
    }
}
while(ch!='\n');

```

```

i=0;
number=1;
ch=0;
printf("enter your last string word");

```

```

do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        p=(char*)realloc(q,number*sizeof(char));
        *(p+i)=ch;
        *(p+i+1)='\0';
        i++;
    }
}
while(ch!='\n');

```

```

i=0;
j=0;

while(*(q+i)!=' ')
{
    *(r+j)=*(q+i);
    i++;
    j++;
}
*(r+j)='\0';

*(r+j)=' ';
j++;
i=0;

```

```

while(*(p+i)!='\0')
{
    *(r+j)=*(p+i);
    j++;
    i++;
}

```

```

}

i=0;
while(*(r+i)!='\0')
{
    printf("%c",*(r+i));
    i++;
}

getch();

}

```

/*****

Q 17. Write a C Program to Find 2 Elements in the Array
 such that Difference between them is Largest

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```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
    int i,max=0,n, min,*p;
    printf("Enter Array Number :");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));
    printf("Enter Array element");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
    for(i=0;i<n;i++)
    {
        if(max<*(p+i))
        {
            max=*(p+i);
        }
    }

    min=*(p+0);
    for(i=0;i<n;i++)
    {
        if(min>*(p+i))
        {
            min=*(p+i);
        }
    }
}

```

```

    }
    printf("two Elements in the array such that Difference between them is Largest 1)
    %d 2) %d",max ,min);
    free(p);
    getch();
}

```

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Q 20. Write a C program which accepts a string from user which contains a characters from 'b' to 'y'. (Using Dynamic Memory Allocation)

Eg:

Input String: mn jn kn kazfd

Output String: mn jn kn k

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*****/

```

#include <stdio.h>

```

```

#include<conio.h>

```

```

#include<stdlib.h>

```

```

void main()

```

```

{

```

```

char *p,ch;

```

```

int i=0,temp=0,number=1,j=0;

```

```

p=(char*)malloc(sizeof(char));

```

```

*(p+0)='\0';//*p='\0';

```

```

printf("enter your main string ");

```

```

do{

```

```

    scanf("%c",&ch);

```

```

    if(ch!='\n')

```

```

    {

```

```

        number++;

```

```

        p=(char*)realloc(p,number*sizeof(char));

```

```

        *(p+i)=ch;

```

```

        *(p+i+1)='\0';

```

```

        i++;

```

```

    }

```

```

}

```

```

while(ch!='\n');

```

```

i=0;
while(*(p+i)!='\0')
{
    if(*(p+i)=='a' || *(p+i)=='z')
    {
        break;
    }
    else
    {
        j++;
        i++;
    }
    i=0;
    while(i<j)
    {
        printf("%c",*(p+i));
        i++;
    }

    getch();
}

```

/*****

Q19. Write a program in C to delete an element at desired position from an array.

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*****/

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
    int i,sum=0,n,in,*p;
    printf("ENTER ARRAY SIZE :");
    scanf("%d",&n);

    p=(int*)malloc(n*sizeof(int));

    printf("ENTER ARRAY ELEMENT");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
    printf("enter your array delete array index ");
    scanf("%d",&in);

    if(in>-1&&in<n)
    {
        for(i=in;i<n;i++)

```

```

    {
        *(p+i)=*(p+i+1);
    }

    for(i=0;i<n-1;i++)
    {
        printf("%d\n",*(p+i));
    }
}
else
printf("enter valid index");

free(p);

getch();
}

```

/*****
 21. Write a C program which accept sentence from user and print number of
 small letters, capital (Using Dynamic Memory Allocation)
 letters, Spaces and digits from that sentence.
 Eg:
 Input String: abcDE 5Glm1 0
 Output String: Small: 5 Capital: 4 Digits: 2 Spaces: 2

OWNER: AKSHAY GANGARAM KADAM
 BATCH: PPA9

```

    *****/
#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *p,ch;
    int i=0,temp=0,number=1,j=0,*q,n,digit=0,small=0,Capital=0,sp=0,N=0;
    p=(char*)malloc(sizeof(char));

    *(p+0)='\0';//*p='\0';

    printf("enter your main string ");

    do{

```



```

scanf("%c",&ch);
if(ch!='\n')
{
    number++;
    p=(char*)realloc(p,number*sizeof(char));
    *(p+i)=ch;
    *(p+i+1]='\0';
    i++;
    N++;
}
}
while(ch!='\n');
i=0;

q=(int*)malloc(n*sizeof(int));

while(*(p+i]!='\0')
{
    *(q+j)=*(p+i);
    j++;
    i++;
}
n=i;
for(i=0;i<n;i++)
{
    if(*(q+i)>=48 && *(q+i)<58)
    {
        digit++;
    }
    if(*(q+i)>=65 && *(q+i)<91)
    {
        Capital++;
    }
    if(*(q+i)>=97 && *(q+i)<123)
    {
        small++;
    }
    if(*(q+i)==' ')
    {
        sp++;
    }

}
printf("the Capital=%d\nthe digit=%d\nthe small=%d\nthe
sp=%d",Capital,digit,small,sp);
free(p);
free(q);

getch();
}

```

```
/******
```

23. Write a C program which accept sentence from user and print number of white spaces from that sentence. (Using Dynamic Memory Allocation)

Eg:

Input String: India is my country

Output: 3

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
```

```
void main()
{
    char *p, ch;
    int i=0, temp=0, number=1, j=0, count=0;
    p=(char*)malloc(sizeof(char));
```

```
    *(p+0)='\0'; // *p='\0';
```

```
    printf("enter your string ");
```

```
    do{
        scanf("%c",&ch);
        if(ch!='\n')
        {
            number++;
            p=(char*)realloc(p, number*sizeof(char));
            *(p+i)=ch;
            *(p+i+1)='\0';
            i++;
        }
    }
    while(ch!='\n');
```

```
    i=0;
    while(*(p+i)!='\0')
    {
        if(*(p+i)==' ')
        {
            count++;
        }
        i++;
    }
```

```

printf("%d",count);
getch();
}

```

```

/*****
Q 24. Write a program in C to find the second largest element in an
array. (Using Dynamic Memory Allocation)
OWNER: AKSHAY GANGARAM KADAM
BATCH: PPA9

```

```

*****/

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    int i, max ,smax,n,*p;
    printf("ENTER ARRAY SIZE YOU WANT");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));
    printf("ENTER ARRAY ELEMENT:");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
    smax=max=0;

    for(i=0;i<n;i++)
    {
        if(*(p+i)>max)
        {
            smax=max;
            max=*(p+i);
        }
        else if(*(p+i)>smax)
        {
            smax=*(p+i);
        }
    }
    printf("the max is :%d\n the second max is :%d",max,smax);
    free(p);

    getch();
}

```

```
/******
```

25. Write a C program which accept sentence from user and print number of words of even and odd length from that sentence. (Using Dynamic Memory Allocation)

Eg:

Input String: India is my country. I love my country.

Output : Even: 5 Odd: 2

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
#include <stdlib.h>
```

```
void main()
```

```
{
```

```
char *p, ch;
```

```
int i=0, temp=0, number=1, j=0, count=0, N=0, even=0, odd=0;
```

```
p=(char*)malloc(sizeof(char));
```

```
*(p+0)='\0'; // *p='\0';
```

```
printf("enter your string ");
```

```
do{
```

```
scanf("%c",&ch);
```

```
if(ch!='\n')
```

```
{
```

```
number++;
```

```
p=(char*)realloc(p, number*sizeof(char));
```

```
*(p+i)=ch;
```

```
*(p+i+1)='\0';
```

```
i++;
```

```
}
```

```
}
```

```
while(ch!='\n');
```

```
i=0;
```

```
while(*(p+i)!='\0')
```

```
{
```

```
N=0;
```

```
while(*(p+i)!=' ' && *(p+i)!='\0')
```

```
{
```

```
i++;
```

```
N++;
```

```
}
```

```

        if(N%2==0)
        {
            even++;
        }
        else
        {
            odd++;
        }
        i++;
    }

```

```

i++;

```

```

printf("the odd string= %d\nthe even string = %d\n",odd,even);
getch();
}

```

```

/*****

```

Q 26. Write a C program which accept sentence from user and position from user and print the word at that position.

Eg:

Input String: India is my country

Input Position: 3

Output String: my

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```

*****/

```

```

#include <stdio.h>

```

```

#include<conio.h>

```

```

#include<stdlib.h>

```

```

void main()

```

```

{

```

```

    int n,i=0,temp=0,count=0,c=0,number=1,N=0,num=0;

```

```

    char *p,ch,*q;

```

```

    p=(char*)malloc(sizeof(char));

```

```

    *p='\0';

```

```

    printf("ENTER YOUR string");

```

```

    do{

```

```

        scanf("%c",&ch);

```

```

        if(ch!='\n')

```

```

        {

```

```

            number++;

```

```

            p=(char*)realloc(p,number*sizeof(char));

```

```

        *(p+i)=ch;
        *(p+i+1)='\0';
        i++;
        N++;
    }

    }while(ch!='\n');

    q=(char*)malloc(N*sizeof(char));

    printf("enter your word number in string");
    scanf("%d",&num);

    i=0;
    while(*(p+i)!='\0')
    {
        if(*(p+i)!=' ' && *(p+i)!='\0')
        {
            while(*(p+i)!=' ' && *(p+i)!='\0')
            {
                i++;
            }

            c++;
        }

        if(num==c)
        {
            temp=i-1;
            break;
        }

        i++;
    }

    i=0;
    while(temp>=0 && *(p+temp)!=' ')
    {
        *(q+i)=*(p+temp);
        temp--;
        i++;
    }
    *(q+i)='\0';

    while(i>=0)
    {

```

```

printf("%c",*(q+i));
i--;

}

free(p);
free(q);
getch();
}

```

/*****

26. Write a C Program to Find the Number of Elements in an Array
 (Using Dynamic Memory Allocation)
 OWNER: AKSHAY GANGARAM KADAM
 BATCH: PPA9

*****/

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    int i, t,*p,n,a;
    printf("ENTER ARRAY SIZE YOU WANT");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));

    printf("ENTER ARRAY ELEMENT:");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

    a=sizeof(*p);
    t=a/sizeof(int);

    printf("TOTAL ELEMENT IN ARRAY\n");
    printf("%d",t);

    getch();
}

```

```
/******
```

Q 29 .Write a C program which accept sentence from user and position from user and print the word at that position.

Eg:

Input String: India is my country

Input Position: 3

Output String: my

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

```
char *a,*b, ch;
```

```
int i,n,c=0,p=0,num=1,N=0,temp=0,number=0;
```

```
a=(char*)malloc(sizeof(char));
```

```
*(a+0)='\0';
```

```
printf("Enter first string: ");
```

```
do{
```

```
    scanf("%c",&ch);
```

```
    if(ch!='\n')
```

```
    {
```

```
        num++;
```

```
        a=(char*)realloc(a,num*sizeof(char));
```

```
        *(a+i)=ch;
```

```
        *(a+i+1)='\0';
```

```
        i++;
```

```
        N++;
```

```
    }
```

```
}
```

```
while(ch!='\n');
```

```
b=(char*)malloc(N*sizeof(char));
```

```
printf("Enter your number");
```

```
scanf("%d",&number);
```



```

i=0;
while(*(a+i)!='\0')
{
    if(*(a+i)!=' ' && *(a+i)!='\n')
    {
        while(*(a+i)!=' ' && *(a+i)!='\n')
        {

            i++;
        }
        c++;
    }
    if(number==c)
    {
        temp=i-1;
        break;
    }
    i++;
}
i=0;
while(temp>=0 && *(a+temp)!=' ')
{
    *(b+i)= *(a+temp);
    temp--;
    i++;
}
*(b+i)='\0';

while(i>=0)
{
    printf("%c", *(b+i));
    i--;
}

getch();
}

```

/*****

Q 30. Write a C Program to Print the Alternate Elements in an Array
 (Using Dynamic Memory Allocation)
 OWNER: AKSHAY GANGARAM KADAM
 BATCH: PPA9

*****/

```

#include<stdio.h>
#include<conio.h>

```

```

#include<stdlib.h>

void main()
{
    int i, n,*p;
    printf("ENTER ARRAY SIZE YOU WANT");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));
    printf("ENTER ARRAY ELEMENT:");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

    printf("Alternate elements of a given array \n");

    for (i = 0; i < n; i += 2)
    {
        printf( "%d\n", *(p+i));
    }

    getch();
}

```

```

/*****
Q 31 .Write a C program to convert the string from upper case to lower case.
(Using Dynamic Memory Allocation)
Eg:
Input String: India Is My Country
Output String: india is my country

```

OWNER: AKSHAY GANGARAM KADAM
 BATCH: PPA9

```

*****/
#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    int *b, n,i=0,temp=0,count=0,number=1,N=0,num=0,D=0,j=0,p=0;

    char *a,ch,*c;
    a=(char*)malloc(sizeof(char));
    *a='\0';
    printf("ENTER YOUR string");
    do{

```

```

scanf("%c",&ch);
if(ch!='\n')
{
    number++;
    a=(char*)realloc(a,number*sizeof(char));
    *(a+i)=ch;
    *(a+i+1]='\0';
    i++;
    N++;
}

}while(ch!='\n');

c=(char*)malloc(N*sizeof(char));
b=(int*)malloc(n*sizeof(int));

i=0;

while(*(a+i]!='\0')
{
    *(b+j)=*(a+i);
    j++;
    i++;
}
n=i;
for(i=0,j=0;i<n;i++,j++)
{
    if(*(b+i)>=97 && *(b+i)<123)
    {
        *(c+i)=*(b+i);
    }
    else
    if(*(b+i)<97 && *(b+i)>64)
    {
        p=*(b+i);
        *(c+j)=p+32;
    }
    else if(*(b+i)==' ')
    {
        *(c+j)==' ';
    }
}
for(i=0;i<n;i++)
{
    printf("%c",*(c+i));
}

free(a);

```

```

free(b);
free(c);
getch();
}

```

```

/*****

```

Q 33. Write a C program which toggles the case of a string. (Using Dynamic Memory Allocation)

Eg:

Input String: technOrbit Infosystems

Output String: TECHNoRBIT iNFOsYSTEMS

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```

*****/

```

```

#include <stdio.h>

```

```

#include<conio.h>

```

```

#include<stdlib.h>

```

```

void main()

```

```

{
    int *b, n,i=0,temp=0,count=0,number=1,N=0,num=0,D=0,j=0,p=0;

```

```

    char *a,ch,*c;

```

```

    a=(char*)malloc(sizeof(char));

```

```

    *a='\0';

```

```

    printf("ENTER YOUR string");

```

```

    do{

```

```

        scanf("%c",&ch);

```

```

        if(ch!='\n')

```

```

        {

```

```

            number++;

```

```

            a=(char*)realloc(a,number*sizeof(char));

```

```

            *(a+i)=ch;

```

```

            *(a+i+1]='\0';

```

```

            i++;

```

```

            N++;

```

```

        }

```

```

    }while(ch!='\n');

```

```

    c=(char*)malloc(N*sizeof(char));

```

```

    b=(int*)malloc(n*sizeof(int));

```

```

    i=0;

```

```

    while(*(a+i]!='\0')

```

```

    {

```

```

*(b+j)=*(a+i);
j++;
i++;
}
n=i;
for(i=0,j=0;i<n;i++,j++)
{
if(*(b+i)>=97 && *(b+i)<123)
{
*(c+i)=*(b+i)-32;
}
else
if(*(b+i)<97 && *(b+i)>64)
{
p=*(b+i);
*(c+j)=p+32;

}
else if(*(b+i)==' ')
{
*(c+j)==' ';
}
}
for(i=0;i<n;i++)
{
printf("%c",*(c+i));
}

free(a);
free(b);
free(c);
getch();
}

```

/*****

34. Write a C Program to Input a String & Store their Ascii Values in an Integer Array (Using Dynamic Memory Allocation)

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

#include <stdio.h>

#include<conio.h>

#include<stdlib.h>

void main()

```

{
int *b, n,i=0,temp=0,count=0,number=1,j=0,N=0;

```

```

char *a,ch,*c;
a=(char*)malloc(sizeof(char));
*a='\0';
printf("ENTER YOUR string");
do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        a=(char*)realloc(a,number*sizeof(char));
        *(a+i)=ch;
        *(a+i+1]='\0';
        i++;
        N++;
    }

}while(ch!='\n');

b=(int*)malloc(n*sizeof(int));

i=0;

while(*(a+i]!='\0')
{
    *(b+j)=*(a+i);
    j++;
    i++;
}
n=i;
for(i=0;i<n;i++)
{
    printf("%d\t",*(b+i));
}

free(a);
free(b);

getch();
}

```

/*****

Q 35. Write a C program to check whether given strings are Anagram strings or not. (Using Dynamic Memory Allocation)

Eg:

Input String1: abccd

Input String2: cbcda

Output String: Strings are anagram

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
char *a, *b,ch;
int len, len1=0, len2=0, i=0, j, f=0, nf=0,num=1;
a=(char*)malloc(sizeof(char));
*(a+0]='\0';
b=(char*)malloc(sizeof(char));
*(b+0]='\0';
```

```
printf("Enter first string: ");
do{
scanf("%c",&ch);
if(ch!='\n')
{
num++;
a=(char*)realloc(a,num*sizeof(char));
*(a+i)=ch;
*(a+i+1]='\0';
i++;
}
}
while(ch!='\n');
```

```
num=1;
i=0;
ch=0;
printf("Enter second string: ");
```

```
do{
scanf("%c",&ch);
if(ch!='\n')
{
num++;
b=(char*)realloc(b,num*sizeof(char));
*(b+i)=ch;
*(b+i+1]='\0';
i++;
}
}
while(ch!='\n');
```

```
i=0;
```

```

while(*(a+i)!='\0')
{
    len1++;
    i++;
}

i=0;

while(*(b+i)!='\0')
{
    len2++;
    i++;
}

if(len1 == len2)
{
    len = len1;
    for(i=0; i<len; i++)
    {
        f = 0;
        for(j=0; j<len; j++)
        {
            if(*(a+i) == *(b+j))
            {
                f = 1;
                break;
            }
        }

        if(f == 0)
        {
            nf = 1;
            break;
        }

        if(nf == 1)
            printf("\nStrings are not Anagram");
        else
            printf("\nStrings are Anagram");
    }

    else
        printf("\nboth string size not same ");
}

getch();
}

```



```
/******
```

36. Write a C program to store squares of the elements in the same array (Using Dynamic Memory Allocation)

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

```
    int i,max=0,n, min,*p;
```

```
    printf("Enter Array Number :");
```

```
    scanf("%d",&n);
```

```
    p=(int*)malloc(n*sizeof(int));
```

```
    printf("Enter Array element");
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        scanf("%d",p+i);
```

```
    }
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        *(p+i)=*(p+i)* *(p+i);
```

```
    }
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        printf("%d\n",*(p+i));
```

```
    }
```

```
    free(p);
```

```
    getch();
```

```
}
```

```
/******
```

Q 37. Write a C program which accept string from user and copy that string into some another string. (Using Dynamic Memory Allocation)

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
char *a, *b,ch;
int num=1,N=0,i=0,j=0;
a=(char*)malloc(sizeof(char));
*(a+0]='\0';

printf("Enter first string: ");
do{
scanf("%c",&ch);
if(ch!='\n')
{
num++;
a=(char*)realloc(a,num*sizeof(char));
*(a+i)=ch;
*(a+i+1]='\0';
i++;
N++;
}
}
while(ch!='\n');

b=(char*)malloc(N*sizeof(char));
j=0;
i=0;
while(*(a+i]!='\0')
{
*(b+j)=*(a+i);
i++;
j++;
}
printf("%s",b);
free(a);
free(b);

getch();

}

```

/*****

Q 38. Write a program which accept string from user and copy first N characters into some destination string. (Using Dynamic Memory Allocation)

Eg:

Input String: India is my country
Input of N: 8
Output String: India is

OWNER: AKSHAY GANGARAM KADAM
BATCH: PPA9

*****/

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
```

```
void main()
{
char *a, *b,ch;
int num=1,N=0,i=0,j=0,tw=0,n;
a=(char*)malloc(sizeof(char));
*(a+0]='\0';
```

```
printf("Enter first string: ");
do{
scanf("%c",&ch);

if(ch!='\n')
{
num++;
a=(char*)realloc(a,num*sizeof(char));
*(a+i)=ch;
*(a+i+1]='\0';
i++;
N++;
}
}
```

```
while(ch!='\n');
```

```
b=(char*)malloc(N*sizeof(char));
```

```
printf("enter your upto boundry word length");
scanf("%d",&tw);
```

```
j=0;
i=0;
for(i=0;i<tw;i++)
{
*(b+i)=*(a+i);
}
*(b+i]='\0';
```

```
printf("%s",b);
```

```
getch();  
}
```

```
/******
```

Q 42. Write a C program which accept two strings from user and append second string after first string. (Using Dynamic Memory Allocation)

Eg:

Input String: India Country

Output String: IndiaCountry

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

```
char *a, *b, ch;
```

```
int num=1, N=0, i=0, j=0, n;
```

```
a=(char*)malloc(sizeof(char));
```

```
*(a+0)='\0';
```

```
printf("Enter first string: ");
```

```
do{
```

```
    scanf("%c",&ch);
```

```
    if(ch!='\n')
```

```
    {
```

```
        num++;
```

```
        a=(char*)realloc(a,num*sizeof(char));
```

```
        *(a+i)=ch;
```

```
        *(a+i+1)='\0';
```

```
        i++;
```

```
        N++;
```

```
    }
```

```
}
```

```
while(ch!='\n');
```

```
b=(char*)malloc(N*sizeof(char));
```

```
i=0;
```

```
while(a[i]!='\0')
```

```
{
```

```
    if(*(a+i)==' ')
```

```
{
```

```

}
else
{
*(b+j)=*(a+i);
j++;
}
i++;
}
for(i=0;i<j;i++)
{
printf("%c",*(b+i));
}

getch();
}

```

```

/*****
Q43: Write C Program to Find Union & Intersection of 2 Arrays(Using
      Dynamic Memory Allocation)

```

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```

*****/

```

```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

```

```

void main()
{

```

```

    int *a,*b,*c,*d,i=0,j=0,n1=0,n2=0,M,found,k=0,n4=0,n3=0;
    printf("enter your 1st array size");
    scanf("%d",&n1);

```

```

    a=(int*)malloc(n1*sizeof(int));

```

```

    printf("enter your 2nd array size");
    scanf("%d",&n2);

```

```

    b=(int*)malloc(n2*sizeof(int));

```

```

    c=(int*)malloc(n1*sizeof(int));
    M=n1+n2;

```

```

d=(int*)malloc(M*sizeof(int));

printf("ENTER YOUR 1ST ARRAY VALUE");
for(i=0;i<n1;i++)
{
    scanf("%d",a+i);
}

printf("ENTER YOUR 2nd ARRAY VALUE");
for(i=0;i<n2;i++)
{
    scanf("%d",b+i);
}

k=0;
for(i=0;i<n1;i++)
{
    found=0;

    for(j=0;j<n2;j++)
    {
        if(*(a+i)==*(b+j))
        {
            found=1;
        }

        if(found)
        {
            *(c+k)=*(a+i);
            k++;
        }
    }
}

i=0;
j=0;

for(i=0;i<n1;i++)
{
    *(d+i)=*(a+i);
}

n4=n1;

for(i=0;i<n2;i++)
{
    found=0;
    for(j=0;j<n1;j++)
    {

```

```

        if(*(b+i)==*(a+j))
        {
            found=1;
        }
        if(!found)
        {
            *(d+n3)=*(b+i);
            n3++;
        }
    }
}

printf("THE INTERSECTION OF TWO ARRAY");
for(i=0;i<k;i++)
{
    printf("%d\n",*(c+i));
}

printf("THE UNION OF TWO ARRAY");
for(i=0;i<n3;i++)
{
    printf("%d\n",*(d+i));
}

getch();

}

```

/*****

Q 44. Write a C program which accept two strings from user and append N characters of second string (Using Dynamic Memory Allocation) after first string.

Eg:

Input String: India Country

Input of N: 4

Output String: IndiaCoun

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

void main()

```

{
char *a, *b,*c,ch;
int num=1,N=0,i=0,j=0,n,temp=0,M=0,k=0,p=0;
a=(char*)malloc(sizeof(char));
*(a+0)='\0';

printf("Enter first string: ");
do{
    scanf("%c",&ch);

    if(ch!='\n')
    {
        num++;
        a=(char*)realloc(a,num*sizeof(char));
        *(a+i)=ch;
        *(a+i+1)='\0';
        i++;
        N++;
    }
}
while(ch!='\n');

i=0;
j=0;
N=0;
num=0;
b=(char*)malloc(sizeof(char));

*(b+0)='\0';
printf("Enter 2nd string: ");
do{
    scanf("%c",&ch);

    if(ch!='\n')
    {
        num++;
        b=(char*)realloc(b,num*sizeof(char));
        *(b+i)=ch;
        *(b+i+1)='\0';
        i++;
        N++;
    }
}
while(ch!='\n');

c=(char*)malloc(N*sizeof(char));

```



```
printf("enter your 2nd string upto element");
scanf("%d",&M);
i=0;
```

```
while(a[i]!='\0')
{
    *(c+j)=*(a+i);
    j++;
    i++;
}
k=temp=j;
```

```
i=0;
p=0;
```

```
while(b[i]!='\0')
{
    *(c+k)=*(b+i);
    k++;
    p++;
    i++;
}
n=p-M;
temp=temp+n+1;
```

```
for(i=0;i<temp;i++)
{
    printf("%c",*(c+i));
}
```

```
getch();
}
```

/*****

Q 45. Write a C program which accept two strings from user and compare two strings. If both strings are equal then return 0 otherwise return difference

between first mismatch character. (Using Dynamic Memory Allocation)

Eg:

Input String1: India is my country.

Input String2: India is my country.

Output: Both strings are equal.

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```

void main()
{
char *a, *b,*c,ch;
int num=1,N=0,i=0,j=0,n,flag=0;

a=(char*)malloc(sizeof(char));
*(a+0)='\0';

printf("Enter first string: ");
do{
    scanf("%c",&ch);

    if(ch!='\n')
    {
        num++;
        a=(char*)realloc(a,num*sizeof(char));
        *(a+i)=ch;
        *(a+i+1)='\0';
        i++;
        N++;
    }
}
while(ch!='\n');

i=0;
j=0;
N=0;
num=0;
b=(char*)malloc(sizeof(char));

*(b+0)='\0';
printf("Enter 2nd string: ");
do{
    scanf("%c",&ch);

    if(ch!='\n')
    {
        num++;
        b=(char*)realloc(b,num*sizeof(char));
        *(b+i)=ch;
        *(b+i+1)='\0';
        i++;
        N++;
    }
}
while(ch!='\n');

```

```

while(*(a+i)!='\0' && *(b+j)!='\0')
{
    if(*(a+i)==*(b+j))
    {
        i++;
        j++;
    }
    else
    {
        flag=1;
        printf("the diff char in both string is= %c , and= %c",*(a+i),*(b+j));
        break;
    }
}

if(flag==0)
{
    printf("both string are equal");
}

getch();
}

```

/*****
 Q 46. Write a C program which accept two strings from user and compare only first N characters of two strings. If both strings are equal till first N characters then return 0 otherwise return difference between first mismatch character. (Using Dynamic Memory Allocation)
 Eg:
 Input String1: Ramayan
 Input String2: Ramanacharya
 Input of N: 4
 Output: Both strings are equal.

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```

*****/
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

void main()
{
    char *a, *b,*c,ch;
    int num=1, n,i=0,j=0,flag=0,N=0,size1=1,size2=1,p=0,M=0;

    a=(char*)malloc(sizeof(char));
    *(a+0)='\0';

```

```

printf("Enter first string: ");
do{
    scanf("%c",&ch);

    if(ch!='\n')
    {
        num++;
        a=(char*)realloc(a,num*sizeof(char));
        *(a+i)=ch;
        *(a+i+1]='\0';
        i++;
    }
}
while(ch!='\n');

i=0;
j=0;
N=0;
num=0;
b=(char*)malloc(sizeof(char));

*(b+0]='\0';
printf("Enter 2nd string: ");
do{
    scanf("%c",&ch);

    if(ch!='\n')
    {
        num++;
        b=(char*)realloc(b,num*sizeof(char));
        *(b+i)=ch;
        *(b+i+1]='\0';
        i++;
    }
}
while(ch!='\n');
i=0;
j=0;

printf("enter compare upto N characters of two strings.");
scanf("%d",&N);

while(*(a+i]!='\0')
{
    size1++;

```

```

i++;
}
while(*(b+j)!='\0')
{
size2++;
j++;
}
if(size1+1>N && size2+1>N)
{
i=0;
j=0;
while(p<=N-1)
{
if(*(a+i)==*(b+j))
{
j++;
i++;
p++;
}
else
{
flag=1;
printf("the diff char in both string is= %c , and= %c",*(a+i),*(b+j));

break;
}

}
if(flag==0)
{
printf("both string are equal");
}
}

getch();
}

```

/*****

Q 48. Write a C program which accept two strings from user and compare only first N characters of two strings. If both strings are equal till first N characters then return 0 otherwise return difference between first mismatch character. (Using Dynamic Memory Allocation)

Eg:

Input String1: Ramayan

Input String2: Ramanacharya

Input of N: 4

Output: Both strings are equal.

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

```
char *a, *c,ch,*d,*f;
```

```
int num=1, n,i=0,j=0,flag=0,N=0,size1=1,size2=1,p=0,M=0,*b,*e;
```

```
a=(char*)malloc(sizeof(char));
```

```
*(a+0]='\0';
```

```
d=(char*)malloc(sizeof(char));
```

```
*(d+0]='\0';
```

```
printf("Enter first string: ");
```

```
do{
```

```
    scanf("%c",&ch);
```

```
    if(ch!='\n')
```

```
    {
```

```
        num++;
```

```
        a=(char*)realloc(a,num*sizeof(char));
```

```
        *(a+i)=ch;
```

```
        *(a+i+1]='\0';
```

```
        i++;
```

```
        M++;
```

```
    }
```

```
}
```

```
while(ch!='\n');
```

```
i=0;
```

```
num=1;
```

```
printf("Enter first string: ");
```

```
do{
```

```
    scanf("%c",&ch);
```

```
    if(ch!='\n')
```

```
    {
```

```
        num++;
```

```
        d=(char*)realloc(d,num*sizeof(char));
```

```
        *(d+i)=ch;
```

```
        *(d+i+1]='\0';
```

```
        i++;
```

```

        M++;

    }
}
while(ch!='\n');

b=(int*)malloc(M*sizeof(int));

e=(int*)malloc(M*sizeof(int));

c=(char*)malloc(M*sizeof(char));

f=(char*)malloc(M*sizeof(char));


i=0;
j=0;


while(*(a+i)!='\0')
{
    *(b+j)=*(a+i);
    j++;
    i++;
}

n=i;

for(i=0,j=0;i<n;i++,j++)
{
    if(*(b+i)>=97 && *(b+i)<123)
    {
        *(c+i)=*(b+i);
    }
    else
        if(*(b+i)<97 && *(b+i)>64)
        {
            p=*(b+i);
            *(c+j)=p+32;
        }
    else if(b[i]==' ')
    {
        *(c+j)=' ';
    }
}
// *****

```

```

i=0;
j=0;
p=0;
n=0;
while(*(d+i)!='\0')
{

*(e+j)=*(d+i);
j++;
i++;
}
n=i;
for(i=0,j=0;i<n;i++,j++)
{
if(*(e+i)>=97 && *(e+i)<123)
{
*(f+i)=*(e+i);
}

else
if(*(e+i)<97 && *(e+i)>64)
{
p=*(e+i);
*(f+j)=p+32;
}
else if(*(e+i)==' ')
{
*(c+j)==' ';
}
}
//*****
i=0;
j=0;
while(*(c+i)!='\0' && *(f+j)!='\0')
{
    if(*(c+i)==*(f+j))
    {

        i++;
        j++;

    }
    else
    {
        flag=1;
        printf("the diff char in both string is= %c , and= %c",*(c+i),*(f+j));
        break;
    }
}

```



```

if(flag==0)
{
printf("both string are equal");
}

getch();
}

```

/*****
 49. Write a C program which accept string from user and then reverse the
 string till first N characters without taking another string. (Using Dynamic
 Memory Allocation)

Eg:

Input String: India is my country

Input of N: 8

Output : m si aidnIy country

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
char *a, *b, ch, temp;
```

```
int i=0, count=0, c=0, A=0, sp=0, N, j=0, num=1;
```

```
a=(char*)malloc(sizeof(char));
```

```
*(a+0)='\0';
```

```
printf("Enter first string: ");
```

```
do{
scanf("%c",&ch);
```

```
if(ch!='\n')
```

```
{
num++;
a=(char*)realloc(a, num*sizeof(char));
*(a+i)=ch;
*(a+i+1)='\0';
i++;
}
```

```
}
```

```

}
while(ch!='\n');

printf("ENTER YOUR UPTO REV STARING VALU OF N");
scanf("%d",&N);

```

```

while(*(a+i)!='\0')
{
    count++;
    i++;
}

```

```

i=0;
while(1)
{
    if(*(a+i)==' ')
    {
        i++;
        sp++;
    }
    else
    {
        i++;
        c++;
    }
    A++;
    if(N==c)
    {
        break;
    }
}

j=0;
i=A-1;

```

```

while(j<i)
{
    temp=*(a+i);
    *(a+i)=*(a+j);
    *(a+j)=temp;
    j++;
    i--;
}
printf("%s",a);

```

```

getch();
}

```

```

/*****
Q 50. Write a C program which accept string from user and then accept range and

```

reverse the string in that range without taking another string. (Using Dynamic Memory Allocation)

Eg:

Input String: India is my country

Input of N1: 3

Input of N1: 9

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{  
char *a, ch,temp;
```

```
int i=0,count=0,c=0,A=0,B=0,sp=0,N1,N2,j=0,num=1;
```

```
a=(char*)malloc(sizeof(char));
```

```
*(a+0)='\0';
```

```
printf("Enter first string: ");
```

```
do{  
scanf("%c",&ch);
```

```
if(ch!='\n')  
{  
num++;  
a=(char*)realloc(a,num*sizeof(char));  
*(a+i)=ch;  
*(a+i+1)='\0';  
i++;  
}
```

```
}  
while(ch!='\n');
```

```
printf("ENTER YOUR UPTO REV STARING VALU OF N");
```

```
scanf("%d",&N1);
```

```
printf("ENTER YOUR UPTO REV STARING VALU OF N");
```

```
scanf("%d",&N2);
```

```
while(*(a+i)!='\0')
```

```
{  
count++;  
i++;  
}
```

```

i=0;
while(1)
{
if(*(a+i)==' ')
{
i++;
sp++;
}
else
{
i++;
c++;
}
A++;
if(N2==c)
{
break;
}
}
c=0;
i=0;
while(1)
{
if(*(a+i)==' ')
{
i++;
}
else
{
i++;
c++;
}
B++;
if(N1==c)
{
break;
}
}

```

```

j=B;
i=A-1;

```

```

while(j<i)
{
temp=*(a+i);
*(a+i)=*(a+j);
*(a+j)=temp;
j++;
i--;
}

```

```

}
printf("%s",a);

getch();
}

```

```

/*****
Q 51. Write a C program to find the maximum sum of a subsequent
numbers in given array. (Using Dynamic Memory Allocation)
OWNER: AKSHAY GANGARAM KADAM
BATCH: PPA9

```

```

*****/

```

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>

```

```

void main()
{
    int i, max ,smax,n,*p;
    printf("ENTER ARRAY SIZE YOU WANT");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));
    printf("ENTER ARRAY ELEMENT:");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }
    smax=max=0;

    for(i=0;i<n;i++)
    {
        if(*(p+i)>max)
        {
            smax=max;
            max=*(p+i);
        }
        else if(*(p+i)>smax)
        {
            smax=*(p+i);
        }
    }
    printf("the maximum sum in array element is :%d\n %d",max,smax);
    free(p);

    getch();
}

```

```
/******
```

Q 53. Write a C program which accept string from user and check whether string is palindrome or not. (Using Dynamic Memory Allocation)

Eg:

Input String: level

Output String: String is palindrome.

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

```
*****/
```

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

```
char *a, ch,temp;
```

```
int i,n,c=0,p=0,num=1;
```

```
a=(char*)malloc(sizeof(char));
```

```
*(a+0)='\0';
```

```
printf("Enter first string: ");
```

```
do{
```

```
    scanf("%c",&ch);
```

```
    if(ch!='\n')
```

```
    {
```

```
        num++;
```

```
        a=(char*)realloc(a,num*sizeof(char));
```

```
        *(a+i)=ch;
```

```
        *(a+i+1)='\0';
```

```
        i++;
```

```
    }
```

```
}
```

```
while(ch!='\n');
```

```
i=0;
```

```
while(*(a+i)!='\0')
```

```
{
```

```
p++;
```

```
i++;
```

```
}
```

```
n=p;
```

```

for(i=0;i<n/2;i++)
{
if(*(a+i)==*(a+n-i-1))
c++;
}
if(c==i)
printf("string is palindrome");
else
printf("string is not palindrome");

getch();
}

```

/*****

Q54. An array consist of Integers. Write a C program to
 count the number of elements less than, greater than
 and equal to zero.

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```

#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
    int i,n,l=0,g=0,z=0,*p;
    printf("ENTER ARRAY SIZE :");
    scanf("%d",&n);
    p=(int*)malloc(n*sizeof(int));
    printf("ENTER ARRAY ELEMENT\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",p+i);
    }

    for(i=0;i<n;i++)
    {
        if(*(p+i)<0)
        {
            l++;
        }
        else if(*(p+i)>0)
        {
            g++;
        }
        else if(*(p+i)==0)
        {

```

```

        z++;
    }

}

printf("LESS THAN ZERO TOTAL NUMBER IS=%d\n",l);
printf("GREATER THAN ZERO TOTAL NUMBER IS=%d\n",g);
printf("NUMBER EQUAL TO ZERO TOTAL NUMBER IS=%d\n",z);

free(p);

getch();
}

```

/*****

Q 55. Write a C program to count number of alphabates, spaces and words in
 given string. (Using Dynamic Memory Allocation)

OWNER: AKSHAY GANGARAM KADAM

BATCH: PPA9

*****/

```

#include <stdio.h>
#include<conio.h>
#include<stdlib.h>

```

```

void main()
{
char *p,ch;
int i=0,temp=0,number=1,j=0,*q,n,digit=0,small=0,Capital=0,sp=0,N=0;
p=(char*)malloc(sizeof(char));

```

```

*(p+0)='\0';//*p='\0';

```

```

printf("enter your main string ");

```

```

do{
    scanf("%c",&ch);
    if(ch!='\n')
    {
        number++;
        p=(char*)realloc(p,number*sizeof(char));
        *(p+i)=ch;
        *(p+i+1]='\0';
        i++;
        N++;
    }
}
while(ch!='\n');
i=0;

```



```

q=(int*)malloc(n*sizeof(int));

while(*(p+i)!='\0')
{
    *(q+j)=*(p+i);
    j++;
    i++;
}
n=i;
for(i=0;i<n;i++)
{
    if(*(q+i)>=48 && *(q+i)<58)
    {
        digit++;
    }
    if(*(q+i)>=65 && *(q+i)<91)
    {
        Capital++;
    }
    if(*(q+i)>=97 && *(q+i)<123)
    {
        small++;
    }
    if(*(q+i)==' ')
    {
        sp++;
    }

}
printf("the Capital=%d\nthe digit=%d\nthe small=%d\nthe
sp=%d",Capital,digit,small,sp);
free(p);
free(q);

getch();
}

```