Practice - 1

1BM19CS061
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1) Program to find total marks of 5 Subj. for n-Students.

```
#include<stdio.h>
Struct Student {
        char name[20];
        int marks[10], total;
} std[100];
int main()
{
    int i, j, n;
    printf("Enter total number of Students :\n");
    Scanf("%d", &n);
    for(i=1; i<=n; i++){
        Std[i].total = 0;
        printf("Enter Name of Student : \n");
        scanf("%s", & Std[i].name);
        for(j=1; j<=5; j++){
            printf("Enter the marks scored
                    by Student in subj %d:\n");
            Scanf("%d", std[i].marks[j]);
            Std[i].total += std[i].marks[j];
        }
    }
    printf("\n\t\t MARKSHEET : \n");
    printf("\n NAME \t\t SUB1 \t\t SUB2 \t\t SUB3
            \t\t SUB4 \t\t SUB5 \t\t TOTAL \t\n");
    for(i=1; i<=n; i++)
        Printf("\n%s \t\t %d \t\t %d \t\t %d \t\t %d \t\t %d
            \t\t %d \t\t %d \n", std[i].name
            std[i].marks[1], std[i].marks[2], std[i]
```

```
        std[i].marks[3], std[i].marks[4],
        std[i].marks[5], std[i].total
    }
    return 0;
}
```

Q) Prepare Salary Bill of an employee

```
#include<stdio.h>
Struct employee {
    char name[50];
    float basic, da, hra, ma, gross, pf, net;
} emp[100];
void main()
{
    int i, n;
    printf("Enter name of employee : \n");
    scanf("%d", &n);
    for(i=0; i<n; i++)
    {
        Printf("\nEnter the Basic Salary : \n");
        Scanf("%f", &emp[i].basic);
        printf("\nEnter the Dearness Allowance %age : \n");
        Scanf("%f", &emp[i].da);
        printf("\nEnter the H.R.A percentage : \n");
        Scanf("%%f", &emp[i].hra);
        printf("\nEnter the MA : \n");
        Scanf("%f", &emp[i].ma);
        printf("\nEnter P.f Percentage : \n");
        scanf("%f", &emp[i].pf);
        emp[i].gross = (emp[i].basic +
                        (emp[i].basic * emp[i].da/100)
                        +(emp[i].basic * emp[i].hra/100)
                        + emp[i].ma);
        emp[i].pf = emp[i].basic * emp[i].pf/100;
```

```
        emp[i].net = emp[i].gross - emp[i].pf;
    }
    for( i= 0; i<n ; i++)
    {
        printf (" \n ====== SALARY SLIP ======\n");
        printf ("\nBasic : %.2f", emp[i].basic);
        printf ("\n DA :  %.2f", emp[i].basic *
                                    emp[i].da /100);
        printf (" \n HRA :  %.2f", emp[i].basic*
                                    emp[i].hra/100);
        printf (" \n MA :  %.2f", emp[i].ma);
        printf (" \n GROSS : %.2f", emp[i].gross);
        printf (" \n PF :  %.2f", emp[i].pf);
        printf (" \n NET : %.2f", emp[i].net);
        printf (" \n ====== END ======\n");
    }
}
```

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3) Program to perform Banking operation

```
#include<stdio.h>
int main()
{
    int i, n, opt, acno;
    float dep, wit, amt;
    char name, ch, hname;
    printf("Enter Name of Bank : \n");
    scanf("%s", &name);
    printf("\nDetails for Account : \n");
    printf("\n Enter the Account Number : ");
    scanf("%d", &acno);
    printf("\n Enter the Account holder Name : ");
    scanf("%s", &hname);
    printf("\n Enter the Amount in Account:");
    scanf("%f", &amt);
    do {
        printf("\n what's on your mind : \n");
        printf(" OPTIONS : \n\n 1- Deposition
                \n 2- Withdrawl \n\n");
        scanf("%d", &opt);
        switch(opt)
        {
            case 1 :
                printf("\n Enter Amount to be
                        Deposited : ");
                scanf("%f", &dep);
                amt += dep;
                printf("\n Amount after Deposition
                        : %f", amt);
                break;
```

```
case 2 :
        printf("\n Enter Amount to be withdrawn: ");
        scanf("%f", &wit);
        amt -= wit;
        printf("\n Amount after
                withdrawl : %.f", amt);
        break;
default :
        printf("\n Invalid Input \n
                Try Again !! \n");
        break;
}
printf("\n Do you want to repeat
        the operation Y/N : \n");
scanf("%c", &ch);
}
while (ch == 'y' || ch == 'Y');
return 0;
}
```

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4) Program to accept Name, Regno, mark1, mark2, mark3 of Students. and display the details:-

```
# include <stdio.h>
# include <string.h>
  Struct student {
        char name [20];
        int ~~name~~ regno, rank;
        float tmarks, total;
  } std [100];
   int main()
  {
      struct Student temp, t;
      int i, j, n, s1, s2, s3;
      printf("\n Enter the no. of students : ");
      Scanf (" %.d", & n);
      for ( i=0; i<n ; i++)
      {
          ~~party~~ printf(" \n\t\t Student %.d", i+1);
          printf(" \n Enter the Name : ");
          Scanf(" %.s ", & std [i]. name);
          printf ("\nEnter the registration Number:");
          Scanf(" %.d", & std[i]. regno);
          printf (" Enter marks in Sub. #1 : ");
          Scanf (" %.d", & s1);
          Printf (" Enter marks in Sub 2 : ");
          Scanf (" %.d", & s2);
          ~~printf(" %.d ", & s3)~~
          printf (" Enter marks in Sub 3 : ");
          Scanf (" %.d", & s3);
```

```
std[i].total = s1 + s2 + s3;
std[i].tmarks = s1 + s2 + s3;
}
    for(i=0; i<n; i++)
    {
      for(j=i+1; j<n; j++)
        {
          if(std[i].tmarks < std[j].tmarks)
          {
                t = std[i];
              std[i] = std[j];
              std[j] = t;
          }
        }
    }
for(i=0; i<n; i++)
    std[i].rank = i+1;
for(i=0; i<n; i++)
    {
      for(j=1+i; j<n; j++)
        {
          if(strcmp(std[i].name, std[j].name)> 0)
          {
                temp = std[i];
              std[i] = std[j];
              std[j] = temp;
          }
        }
    }
```

```
printf("\n Name \t\t Regno. \t\t Total Marks
                \t\t RANK \n");
for (i=0 ; i<n ; i++)
{
  printf ("\n %.s \t\t %.d \t\t %.f
          \t\t %.d", std[i].name,
          std[i].regno, std[i].total,
          std[i].rank);
}
return 0;
}
```

5)

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Program to insert an element at a relevant position in an array using func.

```
#include <stdio.h>
int ins(int pos, int e, int n, int arr[]){
    int j;
    for(j=n-1; j>=pos; j--)
    {
        arr[j+1] = arr[j];
    }
    arr[pos] = e;
}
int main()
{
    int arr[100], n, pos, e, i;
    printf("Enter the length of Array: \n");
    scanf("%d", &n);
    for(i=0; i<n; i++){
        printf("\n Arr[%d]: ", i);
        scanf("%d", &arr[i]);
    }
    printf("\n Enter the position at which
            element is to be entered: ");
    scanf("%d", &pos);
    printf("\n Enter the element to be
            entaed: ");
    scanf("%d", &e);
    ins(pos, e, n, arr);
    for(i=0; i<n; i++)
    {
        printf("\t Arr[%d]: %d\n", i,
                arr[i]);
    }
    return 0;
}
```

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6) Program to find the alphanumeric charact- and their count in a line of text.

```
#include <stdio.h>
int main()
{
    char string[100];
    int count = 0;
    printf("Enter a string : \n");
    fgets(string, 100, stdin);
    printf("\n Alphanumeric characters in
            string are : \n");
    for(int i=0; i< strlen(string); i++)
    {
        if(isalnum(string[i]))
            printf("%c", string[i]);
            count += 1;

    }
printf("\n\n Total Number of Alphanumeric
                characters : %d\n", count
    return 0;
}
```