1. Define a structure Employee with member variables id, name, salary

Ans #include<stdio.h>

struct Employee

{

int id;

char name[30];

int salary;

};

2. Write a function to take input employee data from the user. [ Refer structure from question 1 ]

Ans #include<stdio.h>

struct Employee

{

int id;

char name[30];

int salary;

};

int main()

{

struct Employee e;

printf("Enter id, name,salary : ");

scanf("%d",&e.id);

fflush(stdin);

fgets(e.name,30,stdin);

scanf("%d",&e.salary);

printf("ID = %d, name = %s, salary = %d",e.id,e.name,e.salary);

return 0;

}

3. Write a function to display employee data. [ Refer structure from question 1 ]

Ans #include<stdio.h>

struct Employee

{

int id;

char name[30];

int salary;

};

int main()

{

struct Employee e[5];

int i;

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

{

printf("Enter id, name,salary : ");

scanf("%d",&e[i].id);

fflush(stdin);

fgets(e[i].name,30,stdin);

scanf("%d",&e[i].salary);

}

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

printf("ID = %d, name = %s, salary = %d\n",e[i].id,e[i].name,e[i].salary);

return 0;

}

4. Write a function to find the highest salary employee from a given array of 10 employees. [ Refer structure from question 1]

Ans #include<stdio.h>

struct Employee

{

int id;

char name[30];

int salary;

};

void display(struct Employee e)

{

printf("ID = %d, name = %s, salary = %d",e.id,e.name,e.salary);

}

void highest(struct Employee p[],int n)

{

int i;

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

{

if(p[0].salary<p[i].salary)

{

p[0]=p[i];

}

}

}

int main()

{

struct Employee e[5];

int i;

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

{

printf("Enter id, name,salary : ");

scanf("%d",&e[i].id);

fflush(stdin);

fgets(e[i].name,30,stdin);

scanf("%d",&e[i].salary);

}

printf("Highest Salaried Employee:- ");

highest(e,5);

display(e[0]);

return 0;

}

5. Write a function to sort employees according to their salaries [ refer structure from question 1]

Ans #include<stdio.h>

struct Employee

{

int id;

char name[30];

int salary;

};

void display(struct Employee e)

{

printf("ID = %d, name = %s, salary = %d \n",e.id,e.name,e.salary);

}

void sortsalary(struct Employee p[],int n)

{

int i,j;

struct Employee temp;

for(i=0;i<n-1;i++)

{

for(j=i;j<n-1-i;j++)

{

if(p[j].salary>p[j+1].salary)

{

temp=p[j];

p[j]=p[j+1];

p[j+1]=temp;

}

}

}

}

int main()

{

struct Employee e[5];

int i;

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

{

printf("Enter id, name,salary : ");

scanf("%d",&e[i].id);

fflush(stdin);

fgets(e[i].name,30,stdin);

scanf("%d",&e[i].salary);

}

sortsalary(e,5);

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

display(e[i]);

return 0;

}

6. Write a function to sort employees according to their names [refer structure from question 1]

Ans #include<stdio.h>

#include<string.h>

struct Employee

{

int id;

char name[30];

int salary;

};

void display(struct Employee e)

{

printf("ID = %d, name = %s, salary = %d \n",e.id,e.name,e.salary);

}

void sortname(struct Employee p[],int n)

{

int i,j;

struct Employee temp;

for(i=0;i<=n-2;i++)

{

for(j=i+1;j<=n-1;j++)

{

if(strcmp(p[i].name ,p[j].name)>0)

{

temp=p[i];

p[i]=p[j];

p[j]=temp;

}

}

}

}

int main()

{

struct Employee e[5];

int i;

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

{

printf("Enter id, name,salary : ");

scanf("%d",&e[i].id);

fflush(stdin);

fgets(e[i].name,30,stdin);

scanf("%d",&e[i].salary);

}

sortname(e,5);

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

display(e[i]);

return 0;

}

7. Write a program to calculate the difference between two time periods.

Ans #include<stdio.h>

struct time

{

int hour;

int min;

int sec;

};

void time\_diff(struct time start,struct time stop, struct time \*diff)

{

while(start.sec>stop.sec)

{

--stop.min;

stop.sec +=60;

}

diff->sec=stop.sec-start.sec;

while(start.min>stop.min)

{

--stop.hour;

stop.min +=60;

}

diff->min=stop.min-start.min;

diff->hour=stop.hour-start.hour;

}

int main()

{

struct time start\_time,stop\_time,diff;

printf("Start time-\n");

printf("Enter Hours,min,sec : ");

scanf("%d%d%d",&start\_time.hour,&start\_time.min,&start\_time.sec);

printf("Stop time-\n");

printf("Enter Hours,min,sec : ");

scanf("%d%d%d",&stop\_time.hour,&stop\_time.min,&stop\_time.sec);

time\_diff(start\_time,stop\_time,&diff);

printf("\n Time Difference:- %d:%d:%d - ",start\_time.hour,start\_time.min,start\_time.sec);

printf("%d:%d:%d ",stop\_time.hour,stop\_time.min,stop\_time.sec);

printf("= %d:%d:%d",diff.hour,diff.min,diff.sec);

return 0;

}

8. Write a program to store information of 10 students and display them using structure.

Ans #include<stdio.h>

struct student

{

int id;

char name[30];

int age;

char clas[10];

};

void display (struct student x)

{

printf("\nID = %d, Name = %s, Age =%d,Class = %s\n",x.id,x.name,x.age,x.clas);

}

int main()

{

struct student g[5];

int i;

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

{

printf("Enetr id : ");

scanf("%d",&g[i].id);

printf("Enetr Name : ");

fflush(stdin);

fgets(g[i].name,30,stdin);

printf("Enetr Age : ");

scanf("%d",&g[i].age);

printf("Enetr Class : ");

fflush(stdin);

fgets(g[i].clas,10,stdin);

}

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

display(g[i]);

return 0;

}

9. Write a program to store information of n students and display them using structure

Ans

10. Write a program to enter the marks of 5 students in Chemistry, Mathematics and Physics (each out of 100) using a structure named Marks having elements roll no., name, chem\_marks, maths\_marks and phy\_marks and then display the percentage of each student

Ans #include<stdio.h>

struct student

{

int roll\_number;

char name[30];

float phy\_marks;

float chem\_marks;

float math\_marks;

};

int main()

{

struct student g[5];

int i;

float persentage=0;

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

{

printf("Enter Roll Number : ");

scanf("%d",&g[i].roll\_number);

printf("Enter Name : ");

fflush(stdin);

fgets(g[i].name,30,stdin);

printf("Enter Physics Marks : ");

scanf("%f",&g[i].phy\_marks);

printf("Enter Chemistry Marks : ");

scanf("%f",&g[i].chem\_marks);

printf("Enter Mthematics Marks : ");

scanf("%f",&g[i].math\_marks);

}

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

{

persentage=(((g[i].phy\_marks)+(g[i].chem\_marks)+ (g[i].math\_marks))/3);

printf("Persentage of %s = %f\n",g[i].name,persentage);

}

return 0;

}