**Assignment no 1**

1. **Student (rollNo, name, marks)**

#include<stdio.h>

#include<string.h>

struct Student{

int roll;

char name[20];

Student(){

printf("default constructor called\n");

this->roll=0;

strcpy(this->name,"not given");

}

Student(int r,char\* nm){

printf("paramterised constructor called\n");

this->roll=r;

strcpy(this->name,nm);

}

void setroll(int a){

this->roll=a;

}

void setname(char\* nm){

strcpy(this->name,nm)

}

int getroll(){

return this->roll;

}

char\* getname(){

return this->name;

}

void display(){

printf("id is %d",this->roll);

printf(" name is %s\n",this->name);

}

};

int main(){

Student s1;

s1.setroll(10);

s1.setname("sachin");

//printf("%d",s1.getroll());

// printf(" %s\n",s1.getname());

s1.display();

Student s2(3,"raina");

s2.setroll(18);

s2.setname("virat");

//printf("%d",s2.getroll());

//printf(" %s",s2.getname());

s2.display();

}

**2 . Employee (id, name, salary)**

#include <stdio.h>

#include<string.h>

struct emp{

int emp\_id;

char name[20];

double salary;

emp(){

printf("default constructor called\n");

this->emp\_id=0;

strcpy(this->name,"not given");

this->salary=0;

}

emp(int a,char\*nm,double s){

printf("parameterised constructor called\n");

this->emp\_id=a;

strcpy(this->name,nm);

this->salary=s;

}

void setid(int a){

this->emp\_id=a;

}

void setname(char\* nm){

strcpy(this->name,nm);

}

void setsalary(double a){

this->salary=a;

}

void display(){

printf("id= %d",this->emp\_id);

printf(" name= %s",this->name);

printf(" salary= %.2lf",this->salary);

}

int getid(){

return this->emp\_id;

}

char\* getname(){

return this->name;

}

double getsalary(){

return this->salary;

}

};

int main() {

emp e;

e.setid(1);

e.setname("sandesh");

e.setsalary(1290.23);

e.display();

printf("\n");

//printf("%d",e.getid());

//printf(" %s",e.getname());

//printf(" %.2lf",e.getsalary());

emp e1(18,"virat",5000);

e1.setid(2);

e1.setname("roman");

e1.setsalary(1200.10);

e1.display();

//printf("id=%d",e1.getid());

// printf("name=%s",e1.getname());

// printf("salary=%.2lf",e1.getsalary());

}

**3 .Admin (id, name, salary, allowance)**

#include<stdio.h>

#include<string.h>

struct admin{

int id;

char name[20];

double salary;

double allowance;

admin(){

printf("default constructor called\n");

this->id=0;

strcpy(this->name,"not given");

this->salary=0.00;

this->allowance=0.00;

}

admin(int a,char\*nm){

printf("parameterised constructor called\n");

this->id=0;

strcpy(this->name,"not given");

}

void setid(int a){

this->id=a;

}

void setname(char\* nm){

strcpy(this->name,nm);

}

void setsalary(double a){

this->salary=a;

}

void setallowance(double b)

{

this->allowance=b;

}

int getid(){

return this->id;

}

char\* getname(){

return this->name;

}

double getsalary(){

return this->salary;

}

double getallowance(){

return this->allowance;

}

void display(){

printf("id= %d name = %s salary = %.2lf allowance =%.2lf\n",this->id,this->name,this->salary,this->allowance);

}

};

int main(){

admin a;

a.setid(1);

a.setname("sandesh");

a.setsalary(11200.20);

a.setallowance(1200.20);

printf("id= %d name= %s salary= %.2lf allowance= %lf\n",a.getid(),a.getname(),a.getsalary(),a.getcommission());

// a.display();

admin a1(2,"ram");

a1.setid(2);

a1.setname("ram");

a1.setsalary(111200.20);

a1.setallowance(12400.20);

printf("id= %d name= %s salary= %.2lf allowance= %lf\n",a1.getid(),a1.getname(),a1.getsalary(),a1.getallowance());

//a1.display();

}

4. **HR (id, name, salary, commission)**

#include<stdio.h>

#include<string.h>

struct hr{

int id;

char name[20];

double salary;

double commission;

hr(){

printf("default constructor called\n");

this->id=0;

strcpy(this->name,"not given");

this->salary=0.00;

this->commission=0.00;

}

hr(int a,char\*nm){

printf("parameterised constructor called\n");

this->id=0;

strcpy(this->name,"not given");

}

void setid(int a){

this->id=a;

}

void setname(char\* nm){

strcpy(this->name,nm);

}

void setsalary(double a){

this->salary=a;

}

void setcommission(double b)

{

this->commission=b;

}

int getid(){

return this->id;

}

char\* getname(){

return this->name;

}

double getsalary(){

return this->salary;

}

double getcommission(){

return this->commission;

}

void display(){

printf("id= %d name = %s salary = %.2lf commission =%.2lf\n",this->id,this->name,this- >salary,this->commission);

}

};

int main(){

hr a;

a.setid(1);

a.setname("sandesh");

a.setsalary(11200.20);

a.setcommission(1200.20);

printf("id= %d name= %s salary= %.2lf commission= %lf\n",a.getid(),a.getname(),a.getsalary(),a.getcommission());

// a.display();

hr a1(2,"ram");

a1.setid(2);

a1.setname("ram");

a1.setsalary(111200.20);

a1.setcommission(12400.20);

printf("id= %d name= %s salary= %.2lf commission= %lf\n",a1.getid(),a1.getname(),a1.getsalary(),a1.getcommission());

//a1.display();

}

**5. SalesManager (id, name, salary, incentive, target)**

#include<stdio.h>

#include<string.h>

struct sales\_manager{

int id;

char name[20];

double salary;

int target;

double incentive;

sales\_manager(){

printf("default constructor called\n");

this->id=0;

strcpy(this->name,"not given");

this->salary=00.00;

this->target=0;

this->incentive=0;

}

sales\_manager(int a,char\* nm){

printf("parameterised constructor called\n");

this->id=a;

strcpy(this->name,nm);

}

void setid(int a){

this->id=a;

}

void setname(char\* nm){

strcpy(this->name,nm);

}

void setsalary(double a){

this->salary=a;

}

void settarget(int a){

this->target=a;

}

void setincentive(double a){

this->incentive=a;

}

int getid(){

return this->id;

}

char\* getname(){

return this->name;

}

double getsalary(){

return this->salary;

}

int gettarget(){

return this->target;

}

double getincentive(){

return this->incentive;

}

void display(){

printf("id = %d name= %s salary= %.2lf target= %.2lf incentive= %.2lf",this->id,this->name,this->salary,this->target,this->incentive);

}

};

int main(){

sales\_manager s1;

s1.setid(1);

s1.setname("sandesh");

s1.setsalary(1200);

s1.settarget(12);

s1.setincentive(435);

s1.display();

sales\_manager s2(0,"not given");

s2.setid(2);

s2.setname("ram");

s2.setsalary(1000);

s2.settarget(50);

s2.setincentive(435);

s2.display();

}

**6. Date (date, month, year)**

#include<stdio.h>

struct date{

int day;

int month;

int year;

void set\_day(int d){

this->day=d;

}

void set\_month(int m){

this->month=m;

}

void set\_year(int y){

this->year=y;

}

void display(){

printf("day= %d month= %d year= %d",this->day,this->month,this->year);

}

int getday(){

return this->day;

}

int getmonth(){

return this->month;

}

int getyear(){

return this->year;

}

};

int main(){

date d1,d2;

d1.set\_day(7);

d1.set\_month(3);

d1.set\_year(2001);

d1.display();

printf("\n");

d2.set\_day(10);

d2.set\_month(8);

d2.set\_year(2001);

d2.display();

}

**7. Time (hour, min, sec)**

#include <stdio.h>

struct time{

int hour;

int min;

int sec;

time(){

printf("default constructor called\n");

this->hour=0;

this->min=0;

this->sec=0;

}

time(int h,int m,int s){

printf("parameterised constructor called\n");

this->hour=0;

this->min=0;

this->sec=0;

}

void sethour(int a){

this->hour=a;

}

void setmin(int a){

this->min=a;

}

void setsec(int a){

this->sec=a;

}

int gethour(){

return this->hour;

}

int getmin(){

return this->min;

}

int getsec(){

return this->sec;

}

void display(){

printf("hour=%d min=%d sec=%d\n",this->hour,this->min,this->sec);

}

};

int main() {

time d;

d.sethour(5);

d.setmin(39);

d.setsec(23);

d.display();

time d2(2,45,30);

d2.display();

}

**8 .Distance ( feet, inch)**

#include<stdio.h>

struct distance{

int feet;

int inch;

distance(){

printf("default constructor called\n");

this->feet=0;

this->inch=0;

}

distance(int a,int b){

printf("parameterised called\n");

this->feet=a;

this->inch=b;

}

void setfeet(int a){

this->feet=a;

}

void setinch(int b){

this->inch=b;

}

int getfeet(){

return this->feet;

}

int getinch(){

return this->inch;

}

void display(){

printf("feet= %d inch= %d\n",this->feet,this->inch);

}

};

int main(){

distance d1;

d1.setfeet(5);

d1.setinch(2);

d1.display();

distance d2(0,0);

d2.setfeet(10);

d2.setinch(20);

d2.display();

}

**9. Complex (real, imaginary)**

#include<stdio.h>

struct complex{

int real;

int imaginary;

complex(){

printf("default constructor called\n");

this->real=0;

this->imaginary=0;

}

complex(int a,int i){

printf("parameterised constructor called\n");

this->real=a;

this->imaginary=i;

}

void setreal(int a){

this->real=1;

}

void setimaginary(int i){

this->imaginary=i;

}

int getreal(){

return this->real;

}

int getimaginary(){

return this->imaginary;

}

void display(){

printf("complex number %d+%di\n",real,imaginary);

}

};

int main(){

complex c1;

c1.setreal(1);

c1.setimaginary(5);

c1.display();

complex c2(0,0);

c2.setreal(2);

c2.setimaginary(8);

c2.display();

}

**10. Product (id, name, quantity, price)**

#include<stdio.h

#include<string.h>

struct product{

int id;

char name[20];

int quantity;

double price;

product(){

printf("default constructor called\n");

this->id=0;

strcpy(this->name,"not given");

this->quantity=0;

this->price=0.00;

}

product(int a,char\* nm){

printf("paramaterised called\n");

this->id=a;

strcpy(this->name,nm);

}

void setid(int i){

this->id=i;

}

void setname(char \*nm){

strcpy(this->name,nm);

}

void setquantity(int q){

this->quantity=q;

}

void setprice(double p){

this->price=p;

}

int getid(){

return this->id;

}

char\* getname(){

return this->name;

}

int getquantity(){

return this->quantity;

}

void display(){

printf("id= %d name= %s quantity= %d price= %.2lf\n",this->id,this->name,this->quantity,this->price);

}

};

int main(){

product p1;

p1.setid(1);

p1.setname("hp");

p1.setquantity(5);

p1.setprice(35000);

p1.display();

product p2(0,"not given");

p2.setid(2);

p2.setname("dell");

p2.setquantity(5);

p2.setprice(75000);

p2.display();

}