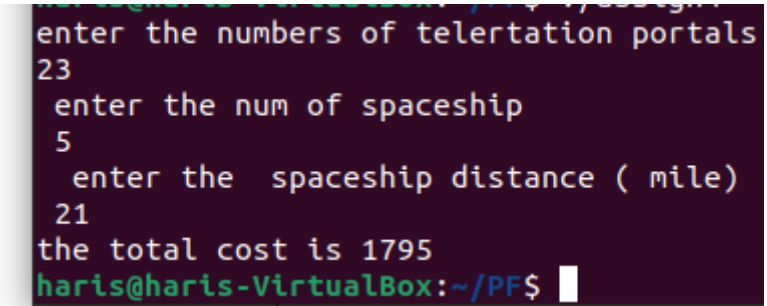
Name : Haris Roll No :23p-0573 Sec : Bs CS-1A

Question#1:

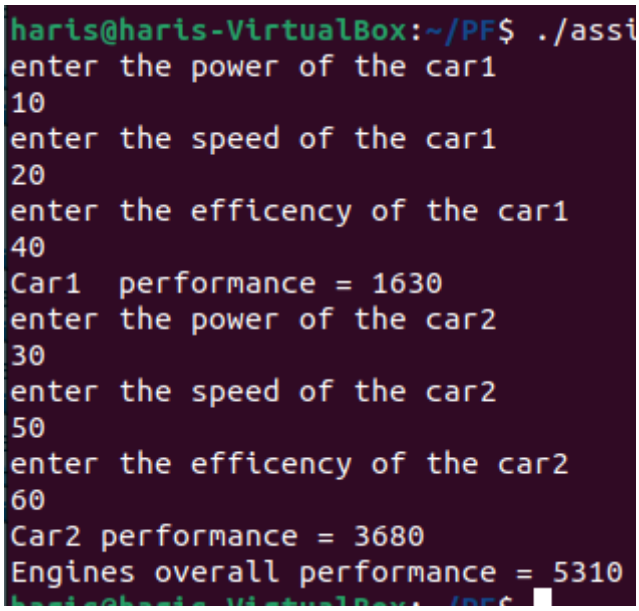
```
#include<stdio.h>
#define teleportation_portals_use 30
#define spaceship_cost 200
#define  spaceship_cost_peruse  5
int teleportationcost(int teleportationportlals);
int spaceshipcost(int spaceships,int distance );
int totalexpense(int spaceship,int distance,int teleportationportals);



int main (void)
{
int teleportationportals,spaceships,distance;

printf("enter the numbers of telertation portals \n");
scanf("%d",&teleportationportals);

printf(" enter the num of spaceship \n ");
scanf ("%d",&spaceships);

printf("  enter the  spaceship distance ( mile) \n ");
scanf ("%d",&distance);
int totalcost=totalexpense( spaceships,distance, teleportationportals);
printf("the total cost is %d\n",totalcost);




return 0;
}

int teleportationcost(int teleportationportals)
{
return teleportation_portals_use * teleportationportals;
}
int spaceshipcost(int spaceships,int distance )
{
return (spaceship_cost * spaceships + spaceship_cost_peruse * distance);
}
int totalexpense(int spaceships,int distance,int teleportationportals)
{
int    totalteleportexpense=teleportationcost( teleportationportals);
int      spacecost=spaceshipcost(spaceships,distance );
return   totalteleportexpense+spacecost;
}
```



Question#2:

```
#include<stdio.h>
int formulaOne_car1(int power1,int speed1);
int formulaOne_car2(int power2,int speed2);
int formulaTow_car1(int efficency1) ;
int formulaTwo_car2(int efficency2) ;

int main(void)
{
int power1,speed1,efficency1,power2,speed2,efficency2;

// taking input speed.power,efficency for car1
printf("enter the power of the car1\n");
scanf("%d",&power1);
printf("enter the speed of the car1\n");
scanf("%d",&speed1);
printf("enter the efficency of the car1\n");
scanf("%d",&efficency1);

int car1_performance=formulaOne_car1( power1, speed1)+formulaTow_car1( efficency1);  // car1
performnace
printf("Car1  performance = %d \n",car1_performance);    //display car1 performnace

// taking input speed,power,efficency for car2

printf("enter the power of the car2\n");
scanf("%d",&power2);
printf("enter the speed of the car2\n");
scanf("%d",&speed2);
printf("enter the efficency of the car2\n");
scanf("%d",&efficency2);
int car2_performance= formulaOne_car2(power2,speed2) +formulaTwo_car2(efficency2);    //car2
perfomance
printf("Car2 performance = %d \n",car2_performance);    // display  car2performance


int engines_overall_performance=car1_performance + car2_performance;       // overall
performance of both cars(optimal power)
printf("Engines overall performance = %d \n",engines_overall_performance);//display overall
performance of both cars(optimal power)
return 0;
}

int formulaOne_car1(int power1,int speed1)
{
return power1+speed1;                        //Total power output for car1
}
int formulaOne_car2(int power2,int speed2)
{
return power2+speed2;                        //Total power output of car2
}
```

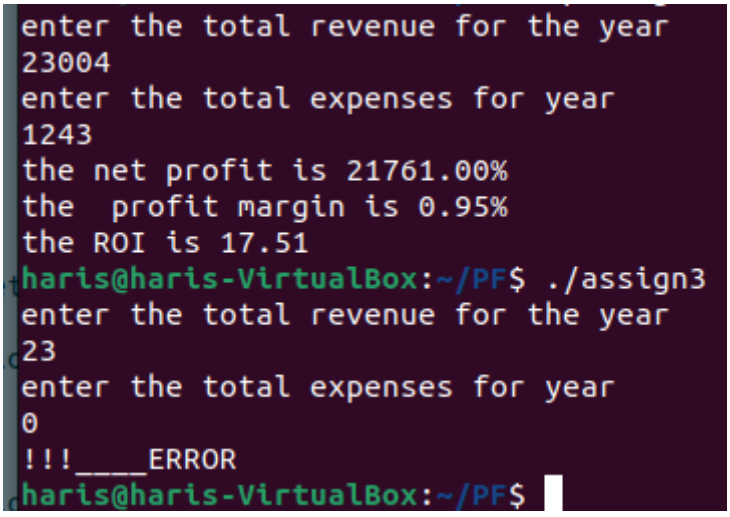
```
int formulaTow_car1(int efficency1)            //Engines efficecies at high of car1
{
return efficency1*efficency1;
}
int formulaTwo_car2(int efficency2)             //Engines efficecies at high of car2
{
return efficency2*efficency2;
}
```

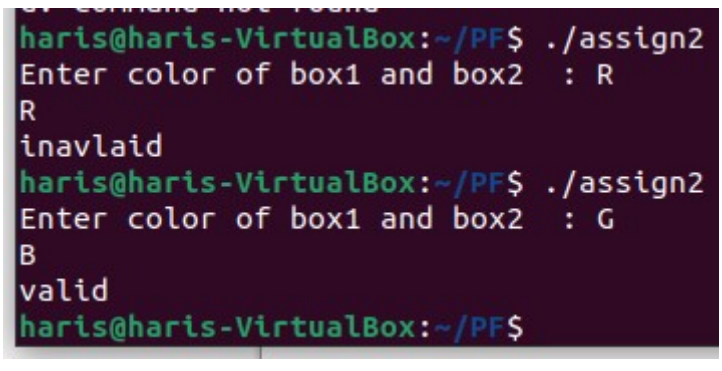


Question#3:

```
#include<stdio.h>
#include<stdbool.h>
float netprofit(float revenue,float expenses);
float profitmargin(float revenue,float expenses);
float ROI(float revenue, float expenses);
float check(float revenue ,float expenses);
int main(void)
{
        float revenue,expenses;
        printf("enter the total revenue for the year \n");
        scanf("%f",&revenue);

    printf("enter the total expenses for year \n");
    scanf("%f",&expenses);
         check(revenue , expenses);



return 0;
}
```

```
float netprofit(float revenue,float expenses)
{
	return revenue-expenses;
}
float profitmargin(float revenue,float expenses)
{
	float x=netprofit( revenue, expenses);
	return x/revenue;
}
float ROI(float revenue, float expenses)
{
	float y= netprofit( revenue, expenses);
	return y/expenses;
}

float check(float revenue ,float expenses)
{
if (revenue<=0 || expenses<=0 )
{
printf("!!!____ERROR\n");
return -1;
}
else
{
    printf("the net profit is %.2f%\n",netprofit( revenue, expenses));
    printf("the  profit margin is %.2f%\n", profitmargin( revenue, expenses));
    printf("the ROI is %.2f\n%", ROI(revenue,expenses));
return 1;
}
}
```



Question#4:

```
#include <stdio.h>
#include<stdbool.h>
char boxCheck(char box1,char box2);
int main()
{
	char box1,box2;

	printf("Enter color of box1 and box2  : ");
	scanf(" %c %c",&box1,&box2);
	boxCheck(box1,box2);

	return 0;
}
char boxCheck(char box1,char box2){
	if (box1== box2)
	{
		printf("inavlaid \n");
		return -1;
	}
	else if  (box1 !=box2 )
	{
		printf("valid\n");
		return 1;
	}
	else{
		;
	}
	if(box1='R'){
		if(box1='G'){
			if(box1='B'){
				if(box2='R'){
					if(box2='G'){
						if(box2='B'){
						}
					}
				}
			}
		}
	}

	return -1;
	}
```