The total distance travelled by vehicle in 't' seconds is given by distance = ut+1/2at2 where 'u' and 'a' are the initial velocity (m/sec.) and acceleration (m/sec2). Write C program to find the distance travelled at regular intervals of time given the values of 'u' and 'a'. The program should provide the flexibility to the user to select his own time intervals and repeat the calculations for different values of 'u' and 'a'.

#include<stdio.h>

main()

{

int a,u,t,t1,t2,i;

float s;

clrscr();

printf("ENTER THE VALUES OF a,u,t,t1,t2:");

scanf("%d%d%d%d%d",&a,&u,&t,&t1,&t2);

for(i=t1;i<=t2;i=i+t) // performing the looping operation for time intervals

{

s=(u\*i)+(0.5\*a\*i\*i); // calculate the total distance

printf("\n\nthe distance travelled in %d seconds is %f ",i,s);

}

getch();

}

Input/Output:

1.ENTER THE VALUES OF a,u,t,t1,t2: 1 2 3 1 5

the distance travelled in 1 seconds is 2.500000

the distance travelled in 4 seconds is 16.000000

2.ENTER THE VALUES OF a,u,t,t1,t2:0 1 2 3 4

the distance travelled in 3 seconds is 3.000000