**SSN COLLEGE OF ENGINEERING (Autonomous)**

**Affiliated to Anna University**

**DEPARTMENT OF CSE**

**UCS 1211 PROGRAMMING IN C LABORATORY**

**A1 : Simple C Programs using I/O statements, conditional and looping constructs**

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1. **Program name:odd or even.** #include<stdio.h>

void main()

{

int n; printf("enter n"); scanf("%d",&n); if(n%2==0)

{

printf("even");

}

else printf("odd");

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.1.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

enter n: 5

odd

1. **Program name: Celsius to Fahrenheit and Kelvin scale.** #include<stdio.h>

void main()

{

int c; float f;

printf("enter the degrees in celcius"); scanf("%d",&c);

f=(c\*9/5)+32;

printf("the degree in fariheniet is=%f",f);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

enter the degrees in celcius5

the degree in fariheniet is=41.000000

**3)Program name: even or odd using flag.**

#include<stdio.h>

void main()

{

int n, flag=0;

printf("enter n");

scanf("%d",&n);

(n%2==0)?(flag=1):(flag=0);

if(flag==1)

{

printf("even");

}

else

printf("odd");

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.3.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

enter n 15

odd

**4)program name: claculation of basic pay.**

#include<stdio.h>

void main()

{ float bp,da,hra,cca; printf("Enter the basic pay"); scanf("%f",&bp); da=(bp\*88/100); hra=(bp\*8/100); cca=1000;

float ins=2000;

float pf=(bp\*12/100); float gross=da+hra+cca; float ded=ins+pf; float net=gross-ded;

printf("The grosspay is %f",gross); printf("The netpay is %f",net);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.4.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the basic pay1000000

The grosspay is 961000.000000The netpay is 839000.000000

**5) Program name: claculation of basic pay based on city and designation.**

#include<stdio.h>

void main()

{ float bp,da,hra,cca; printf("Enter the basic pay"); scanf("%f",&bp); da=(bp\*88/100);

char city; printf("Enter the city"); scanf("%s",&city); switch(city)

{ case 'M':

hra=bp\*10/100;

break;

case 'C':

hra=bp\*8/100;

break;

case 'T':

hra=bp\*5/100;

break;

default:

printf("Inappropriate choice");

break;

}

char d;

printf("Enter the designation");

scanf("%s",&d);

switch(d)

{ case 'W': cca=1000; break; case 'E': cca=2000; break; case 'M': cca=5000; break; default: printf("Inappropriate choice");

}

float ins=2000;

float pf=(bp\*12/100);

float gross=da+hra+cca;

float ded=ins+pf;

float net=gross-ded;

printf("The grosspay is %f",gross);

printf("The netpay is %f",net);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.5.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the basic pay1000000

Enter the cityC

Enter the designationM

The grosspay is 965000.000000The netpay is 843000.000000

**6)Program name: eggtimer.**

#include<stdio.h>

void main()

{ int n;

printf("Enter the size ");

scanf("%d",&n);

for(int i=1; i<=n; i++)

{

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

printf(" ");

for (int k=n-i+1; k>1; k--)

printf("\*\_");

printf("\*");

printf(" \b");

printf("\n");

}

for (int i=2; i<=n; i++)

{

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

printf(" ");

for(int k=1; k<=i-1; k++)

printf("\*\_");

printf("\*");

printf(" \b");

printf("\n");

}

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~$ cd Assignment1 cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.6.c cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out Enter the size 5

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**\*\_\*\_\*\_\***

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**\*\_\*\_\***

**\*\_\*\_\*\_\***

**\*\_\*\_\*\_\*\_\***

**7)Program name: addition og numbers.**

#include<stdio.h>

#include<string.h>

void main()

{ int n;

int a,sum=0;

printf("Enter the no of integers");

scanf("%d",&n);

printf(" \n Enter the numbers");

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

{ scanf("%d",&a);

sum+=a;

}

printf("\n The sum is %d",sum);

sum=0;

printf("\n Enter the numbers to add ");

scanf("%d",&a);

do

{ sum+=a;

scanf("%d",&a);

}while(a!=-999);

printf("\n The sum is %d",sum);

char c;

sum=0;

do

{

printf("\nEnter the number");

scanf("%d",&a);

sum+=a;

printf("\nEnter the choice");

scanf("%s",&c);

}while(c!='n');

printf("\nThe sum of numbers is %d",sum); sum=0;

printf("\nEnter the no of integers");

scanf("%d",&n);

printf("\nEnter the numbers to add ");

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

{ scanf("%d",&a); if(a>0 && a<100)

sum+=a;

}

printf("\nThe sum is %d",sum);

sum=0;

printf("\nEnter the no of integers");

scanf("%d",&n);

printf("\nEnter the numbers to add ");

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

{ scanf("%d",&a); if(a>0 && a<100)

sum+=a;

else

break;

}

printf("\nThe sum is %d",sum);

sum=0;

printf("\nEnter the no of integers");

scanf("%d",&n);

printf("\nEnter the numbers to add ");

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

{ scanf("%d",&a); if(a>0 && a<100)

sum+=a; else

{ printf("\nThe input is invalid . Enter another input");

continue;

}

}

printf("\nThe sum is %d",sum);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the no of integers3

Enter the numbers1

2

3

The sum is 6

**7.a)version 1.**

#include<stdio.h>

#include<string.h>

void main()

{ int n;

int a,sum=0;

printf("Enter the no of integers");

scanf("%d",&n);

printf(" \n Enter the numbers");

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

{ scanf("%d",&a);

sum+=a;

}

printf("\n The sum is %d",sum);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7a.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the no of integers4

Enter the numbers6

7

5

9

The sum is 27

**7.b)version2.**

#include<stdio.h>

#include<string.h>

void main()

{ int n;

int a,sum=0;

printf("\n Enter the numbers to add ");

scanf("%d",&a);

do

{ sum+=a; scanf("%d",&a);

}while(a!=-999);

printf("\n The sum is %d",sum);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7b.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the numbers to add 3

4

6

7

-999

The sum is 20

7.c)**version3.**

#include<stdio.h>

#include<string.h>

void main()

{

int a,sum=0;

char c;

do

{

printf("\nEnter the number");

scanf("%d",&a);

sum+=a;

printf("\nEnter the choice");

scanf("%s",&c);

}while(c!='n');

printf("\nThe sum of numbers is %d",sum); }

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7c.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the number 1

Enter the choice y

Enter the number 2

Enter the choice y

Enter the number 3

Enter the choice n

The sum of numbers is 6

7.d)**version4.**

#include<stdio.h>

#include<string.h>

void main()

{ int n;

int a,sum=0;

printf("\nEnter the no of integers");

scanf("%d",&n);

printf("\nEnter the numbers to add ");

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

{ scanf("%d",&a);

if(a>0 && a<100)

sum+=a;

}

printf("\nThe sum is %d",sum);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7d.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the no of integers4

Enter the numbers to add 2

3

7

6

The sum is 18

7.e)**version5.**

#include<stdio.h>

#include<string.h>

void main()

{ int n;

int a,sum=0;

printf("\nEnter the no of integers");

scanf("%d",&n);

printf("\nEnter the numbers to add ");

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

{ scanf("%d",&a); if(a>0 && a<100)

sum+=a; else

break;

}

printf("\nThe sum is %d",sum);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7e.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the no of integers4

Enter the numbers to add 23

11

12

22

The sum is 68

7.f)**version6.**

#include<stdio.h>

#include<string.h>

void main()

{ int n;

int a,sum=0;

printf("\nEnter the no of integers");

scanf("%d",&n);

printf("\nEnter the numbers to add ");

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

{ scanf("%d",&a); if(a>0 && a<100)

sum+=a; else

{ printf("\nThe input is invalid . Enter another input");

continue;

}

}

printf("\nThe sum is %d",sum);

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.7f.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the no of integers5

Enter the numbers to add 23

21

22

45

67

76

The sum is 254

**8)Program name: simple calculator.**

#include<stdio.h>

void main()

{ int c; float a,b,sum,diff,m,q,s; printf("Enter the choice \n1.Add\n2.Subract\n3.Multiply\n4.Divide\n5.Square"); scanf("%d",&c);

printf("Enter the numbers"); scanf("%f",&a); scanf("%f",&b); switch(c)

{ case 1: sum=a+b;

printf("The sum is %f",sum);

break;

case 2:

diff=a-b;

printf("The difference is %f",diff);

break;

case 3:

m=a\*b;

printf("The product is %f",m);

break;

case 4:

q=a/b;

printf("The qoutient is %f",q);

break;

case 5:

s=a\*a;

printf("The square is %f",s);

break;

}

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.8.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the choice

1.Add

2.Subract

3.Multiply

4.Divide

5.Square5

Enter the number2

The square is 4.000000

**9)Program name:consecutive 5s**

#include<stdio.h>

void main()

{ int n,rem,r,s,status=0; printf("Enter the number to check"); scanf("%d",&n);

int a; while(n!=0) { a=n;

rem=n%10;

if(rem==5)

{ a=a/10; r=a%10; if(r==5)

{ a=a/10; s=a%10; if(s==5)

status=1;

}

}

n=n/10;

}

if(status==1)

printf("Yes it has three consecutive 5s");

else

printf("No it does not have three consecutive 5s"); }

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.9.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the number to check23

No it does not have three consecutive 5s

**10)Program name:odd or even without condition**

#include<stdio.h>

void main()

{ int n;

printf("Enter the number to check");

scanf("%d",&n);

((n%2) && printf("odd") || printf("Even"));

}

**Output**

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ gcc a1.10.c

cseb80@jtl12-HP-285-Pro-G2-MT:~/Assignment1$ ./a.out

Enter the number to check3

odd