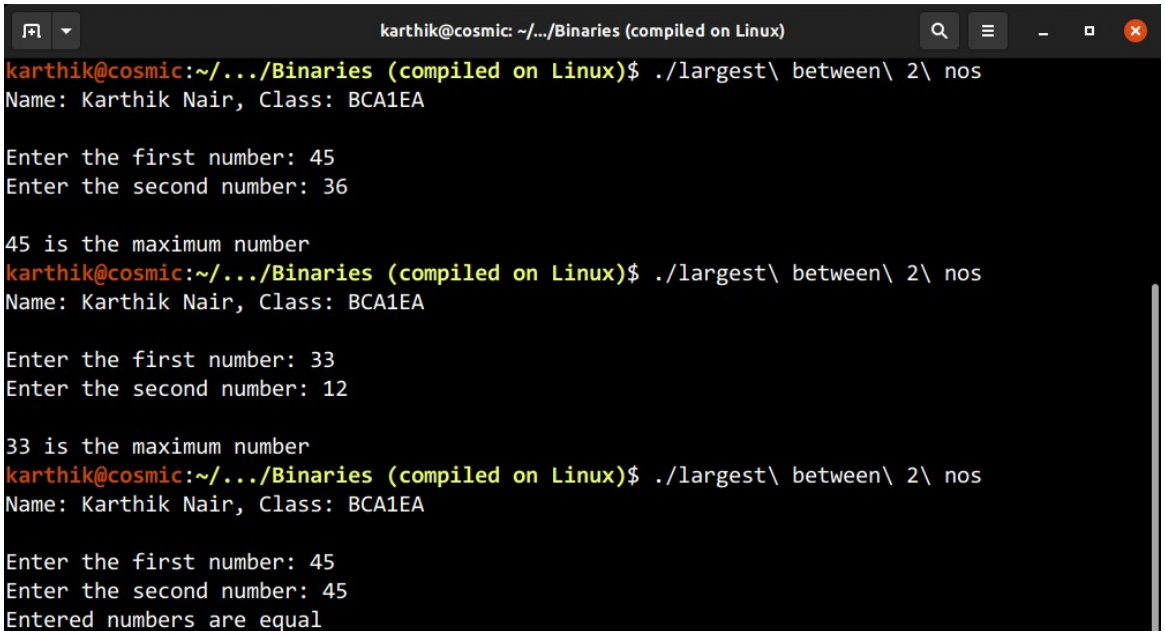
C Programming Assignment 1

Submitted by: Karthik Nair, EA, CET Rank: 585, dated 27th January 2022
Compiler used - gcc 11.2.0 (Ubuntu 11.2.0-7ubuntu2)

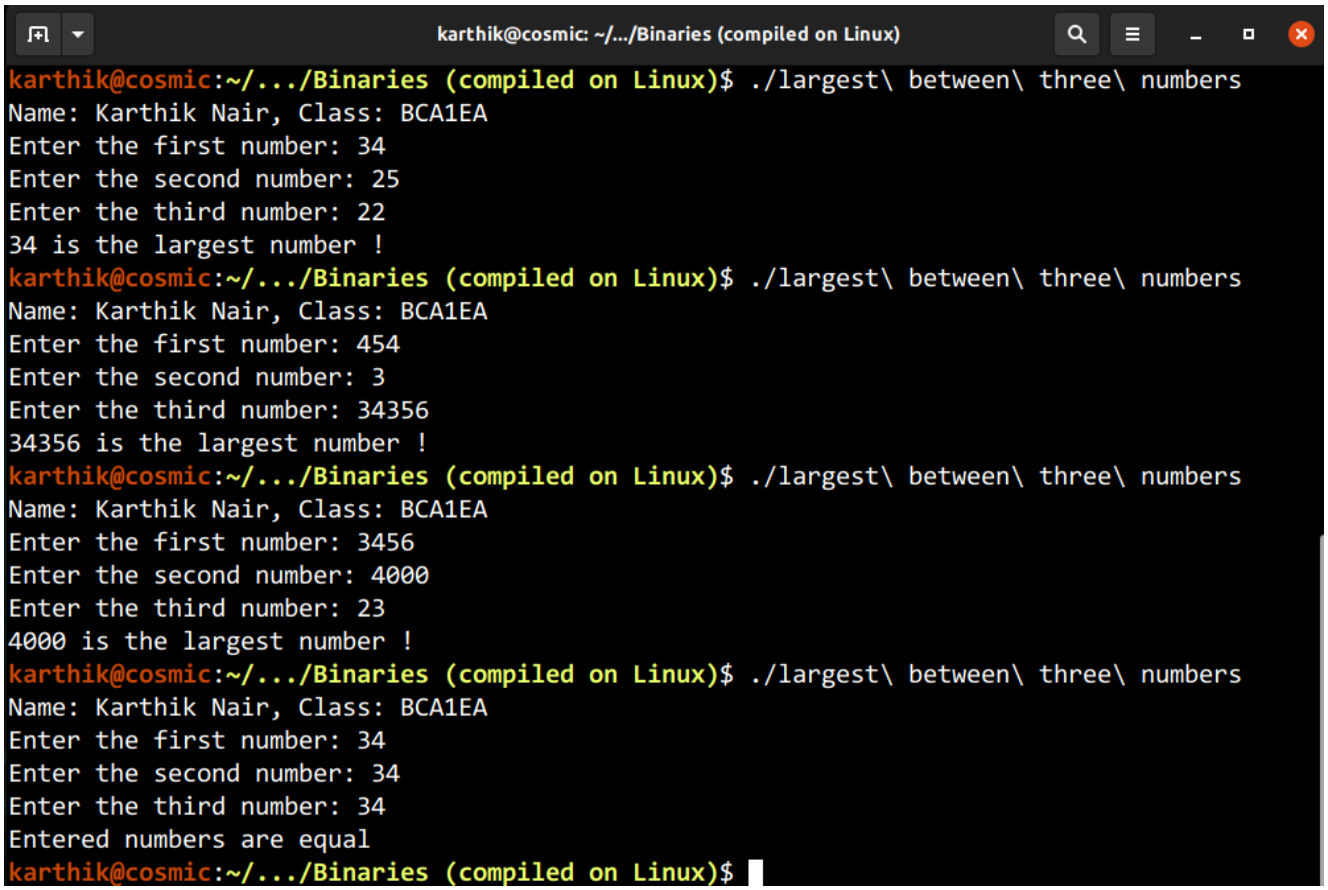
1. Write a C program to find maximum between two numbers.

```c
// Write a C program to find maximum between two numbers.

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	int a,b;
	printf("\nEnter the first number: ");
	scanf("%d", &a);
	printf("Enter the second number: ");
	scanf("%d", &b);
	if (a>b)
	{
		printf("\n%d is the maximum number", a);
	}
	else if (a<b)
	{
		printf("\n%d is the maximum number", b);
	}
	// Exception
	else
	{
		printf("Entered numbers are equal");
	}
	printf("\n");
	return 0;
}
```



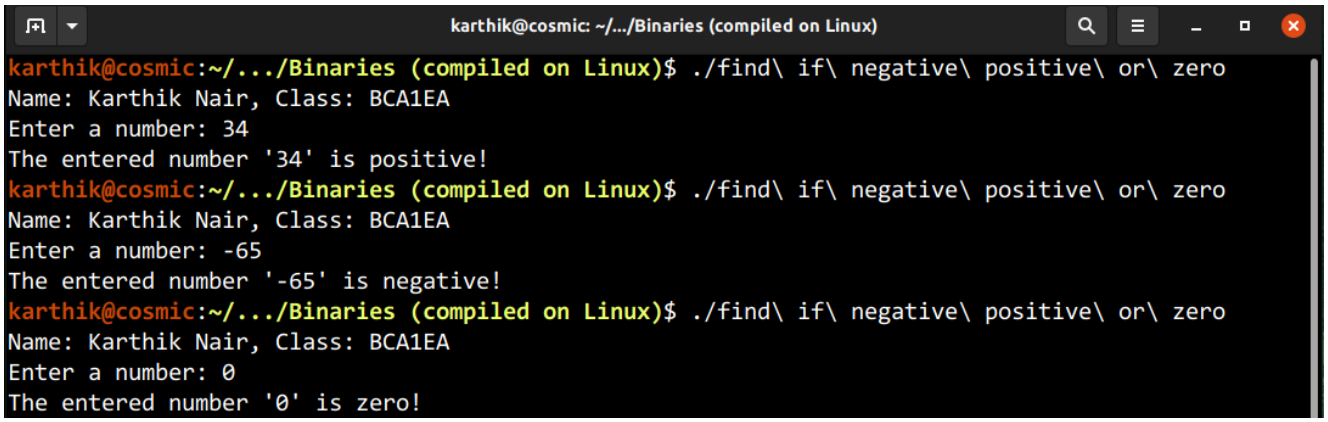
2. Write a C program to find maximum between three numbers.

```
// Write a C program to find maximum between three numbers

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	int a,b,c;
	printf("Enter the first number: ");
	scanf("%d", &a);
	printf("Enter the second number: ");
	scanf("%d", &b);
	printf("Enter the third number: ");
	scanf("%d", &c);
	if ((a>b)&&(a>c))
	{
		printf("%d is the largest number !",a);
	}
	else if ((b>a)&&(b>c))
	{
		printf("%d is the largest number !",b);
	}
	else if ((c>a)&&(c>b))
	{
		printf("%d is the largest number !",c);
	}
	// Exception
	else
	{
		printf("Entered numbers are equal");
	}
	printf("\n");
}
```



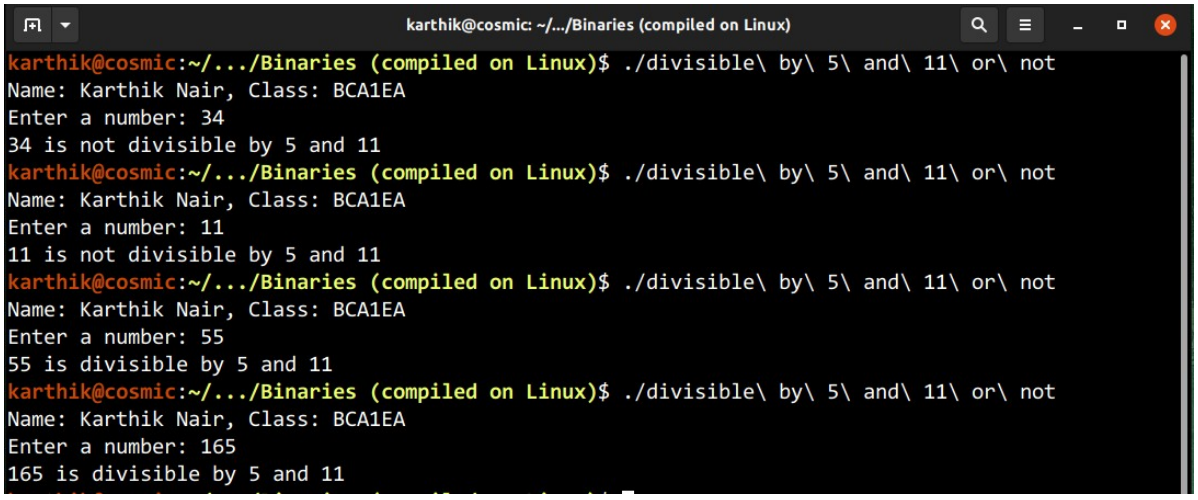
3. Write a C program to check whether a number is negative, positive or zero.

```c
// Write a C program to check whether a number is negative, positive or zero

#include <stdio.h>

int main()
{
      printf("Name: Karthik Nair, Class: BCA1EA\n");
      int num;
      printf("Enter a number: ");
      scanf("%d",&num);
      printf("The entered number '%d' is ",num);
      if (num>0)
      {
            printf("positive!");
      }
      else if (num<0)
      {
            printf("negative!");
      }
      else
      {
            printf("zero!");
      }
      printf("\n");
}
```



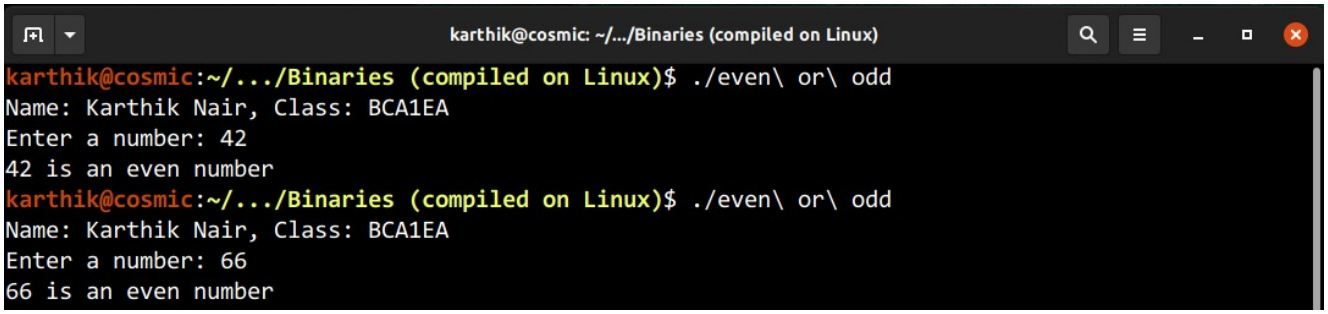
4. Write a C program to check whether a number is divisible by 5 and 11 or not

```c
// Write a C program to check whether a number is divisible by 5 and 11 or not

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	int num;
	printf("Enter a number: ");
	scanf("%d",&num);
	if ((num%5==0)&&(num%11==0))
	{
		printf("%d is divisible by 5 and 11", num);
	}
	else
	{
		printf("%d is not divisible by 5 and 11", num);
	}
	printf("\n");
}
```



5. Write a C program to check whether a number is even or odd

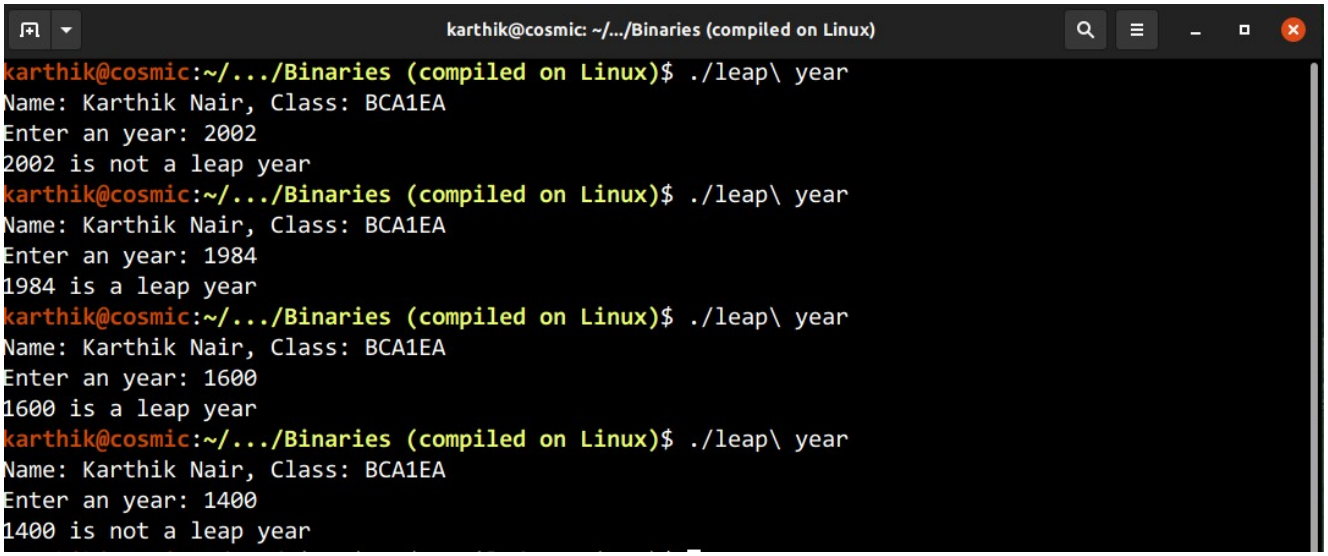
```c
// Write a C program to check whether a number is even or odd

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	int num;
	printf("Enter a number: ");
	scanf("%d", &num);
	printf("%d is an ", num);
	if (num%2==0)
	{
		printf("even");
	}
	else
	{
		printf("odd");
	}
	printf(" number\n");
}
```



6. Write a C program to check whether an year is leap year or not

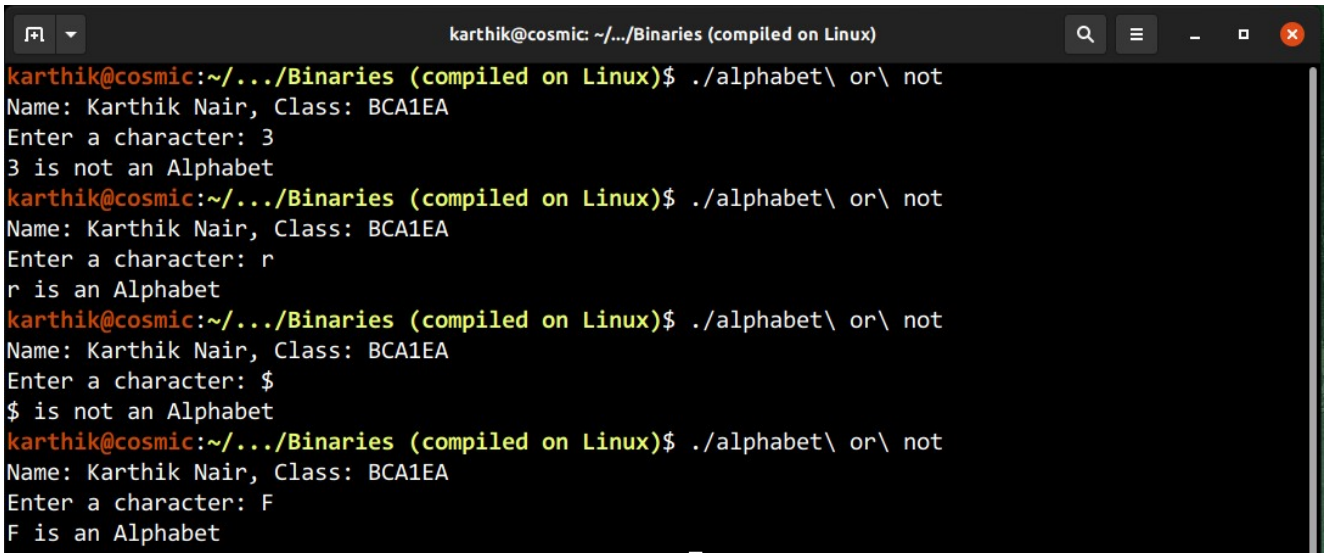
```c
// Write a C program to check whether a year is leap year or not

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	int year;
	printf("Enter an year: ");
	scanf("%d",&year);
	printf("%d is ", year);
	if ((year%4==0)&&((year%400==0)||((year%100)!=0)))
	{
		printf("a leap year");
```

```
	}
	else
	{
		printf("not a leap year");
	}
	printf("\n");
}
```



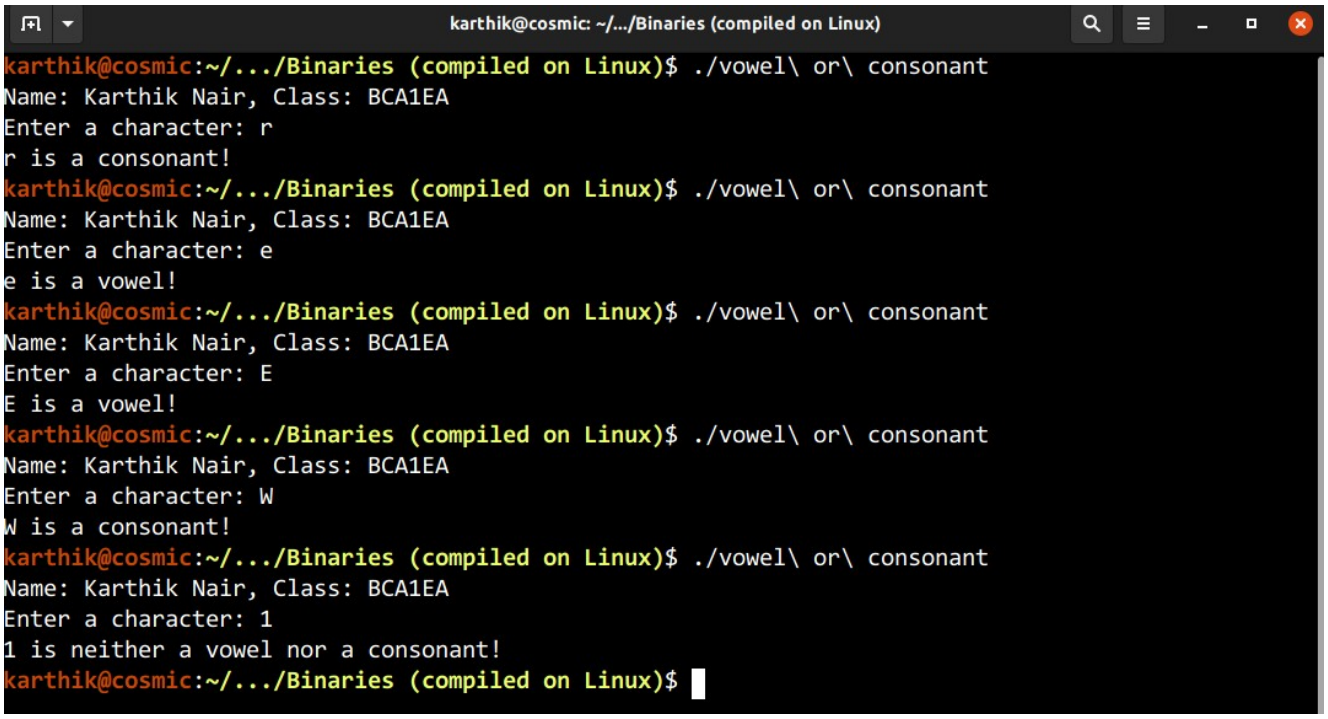
7. Write a C program to check whether a character is alphabet or not.

```
// Write a C program to check whether a character is alphabet or not

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	char a;
	printf("Enter a character: ");
	scanf("%c",&a);
	printf("%c is ", a);
	if (((a>='a')&&(a<='z'))||((a>='A')&&(a<='Z')))
	{
		printf("an Alphabet");
	}
	else
	{
		printf("not an Alphabet");
	}
	printf("\n");
}
```



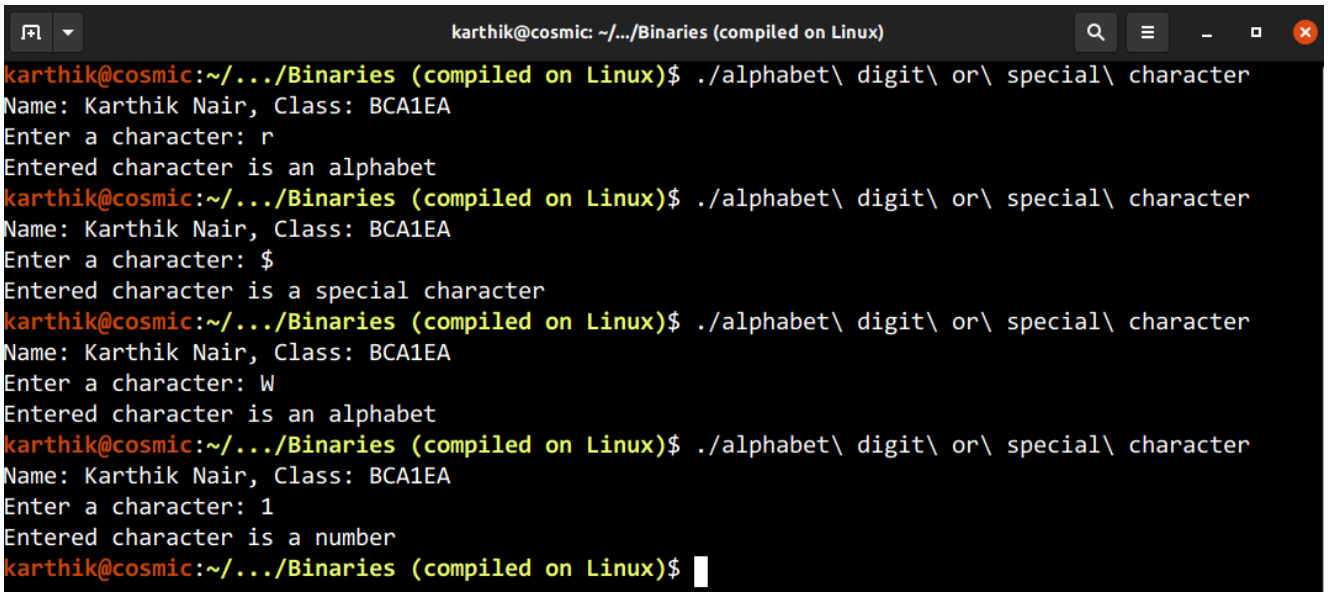
8. Write a C program to input any alphabet and check whether it is vowel or consonant

```
// Write a C program to input any alphabet and check whether it is vowel or consonant

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	char a;
	printf("Enter a character: ");
	scanf("%c",&a);
	printf("%c is ", a);
	if ((a=='a')||(a=='A')||(a=='e')||(a=='E')||(a=='i')||(a=='I')
	||(a=='o')||(a=='O')||(a=='u')||(a=='U'))
	{
		printf("a vowel!\n");
	}
	else if (((a>='a')&&(a<='z'))||((a>='A')&&(a<='Z')))
	{
		printf("a consonant!\n");
	}
	// Exception
	else
	{
		printf("neither a vowel nor a consonant!\n");
	}
}
```



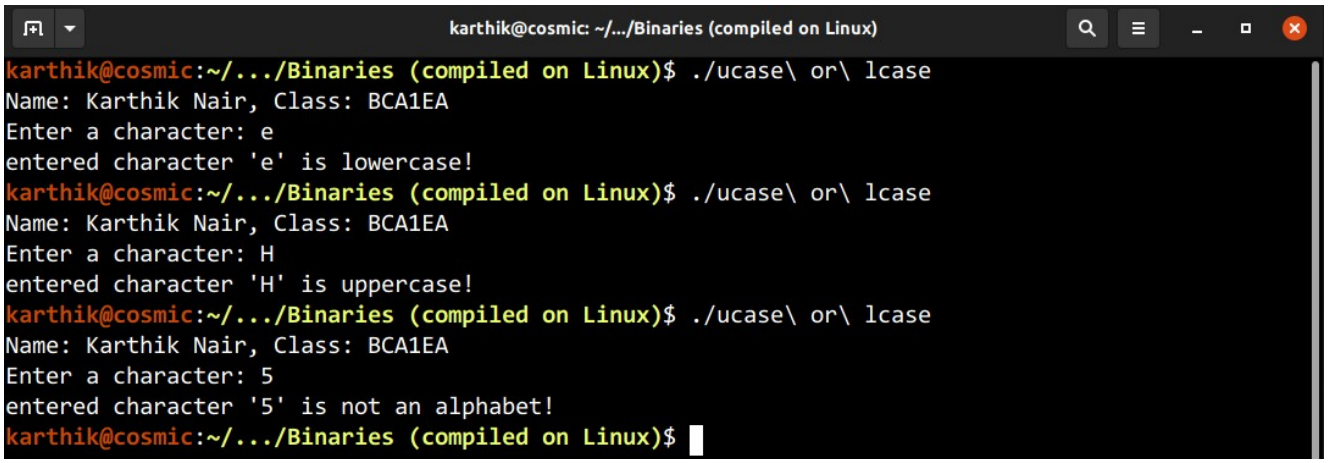
9. Write a C program to input any character and check whether it is alphabet, digit or special character.

```c
#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	char a;
	printf("Enter a character: ");
	scanf("%c", &a);
	printf("Entered character is ");
	if (((a>='a')&&(a<='z'))||((a>='A')&&(a<='Z')))
	{
		printf("an alphabet");
	}
	else if ((a>='0')&&(a<='9'))
	{
		printf("a number");
	}
	else
	{
		printf("a special character");
	}
	printf("\n");
}
```



10. Write a C program to check whether a character is uppercase or lowercase alphabet.

```
// Write a C program to check whether a character is uppercase or lowercase
alphabet

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	char a;
	printf("Enter a character: ");
	scanf("%c", &a);
	printf("entered character '%c' is ", a);
	if (((a>='a')&&(a<='z'))||((a>='A')&&(a<='Z')))
	{
		if ((a>='a')&&(a<='z'))
		{
			printf("lowercase");
		}
		else
		{
			printf("uppercase");
		}
	}
	// Exception
	else
	{
		printf("not an alphabet");
	}
	printf("!\n");
}
```

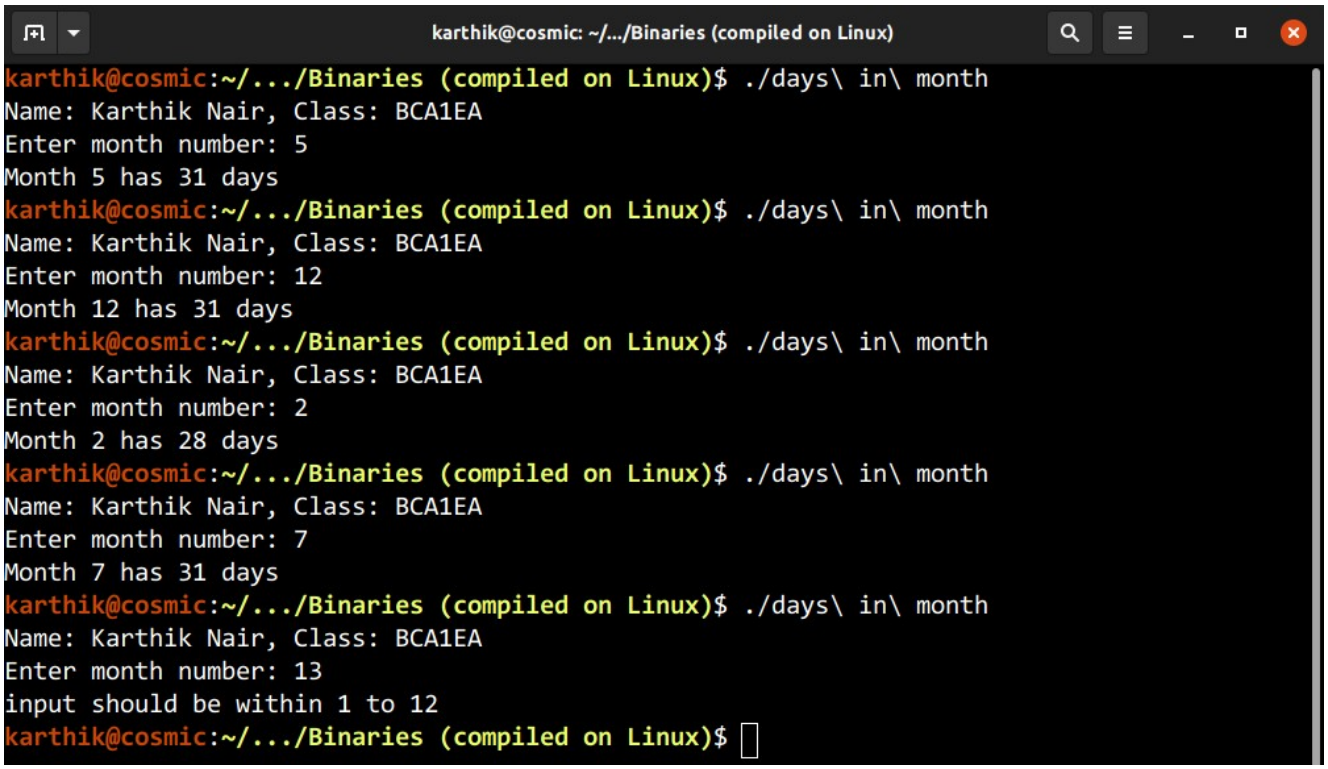


11. Write a C program to input week day number and print week day name

```c
// Write a C program to input week day number and print week day name

#include <stdio.h>

int main()
{
	int week_day_num;
	printf("Enter week day number: ");
	scanf("%d", &week_day_num);
	if ((week_day_num>0)&&(week_day_num<8))
	{
		switch (week_day_num)
		{
			case 1: printf("Monday"); break;
			case 2: printf("Tuesday"); break;
			case 3: printf("Wednesday"); break;
			case 4: printf("Thursday"); break;
			case 5: printf("Friday"); break;
			case 6: printf("Saturday"); break;
			case 7: printf("Sunday"); break;
		}
	}
	else
	{
		printf("Input must be numbers within 1 to 7 ");
	}
	printf("\n");
}
```

12. Write a C program to input month number and print number of days in that month.

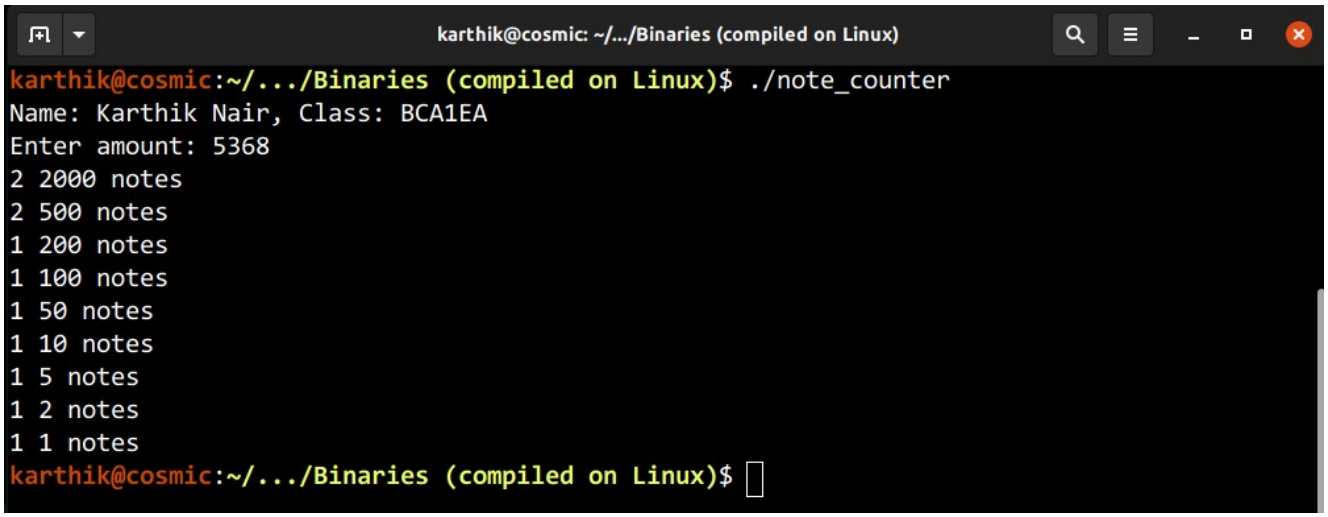
```
// Write a C program to input month number and print number of days in that
month

#include <stdio.h>

int main()
{
      printf("Name: Karthik Nair, Class: BCA1EA\n");
      int num, days;
      printf("Enter month number: ");
      scanf("%d", &num);
      if ((num>=1)&&(num<=12))
      {
            if (num==2)
            {
                  days=28;
            }
            else if ((num==1)||(num==3)||(num==5)||(num==7)||(num==8)||
(num==10)||(num==12))
            {
                  days=31;
            }
            else
            {
                  days=30;
            }
            printf("Month %d has %d days", num, days);
      }
      // Exception
      else
      {
            printf("input should be within 1 to 12");
      }
      printf("\n");
}
```



13. Write a C program to count total number of notes in given amount

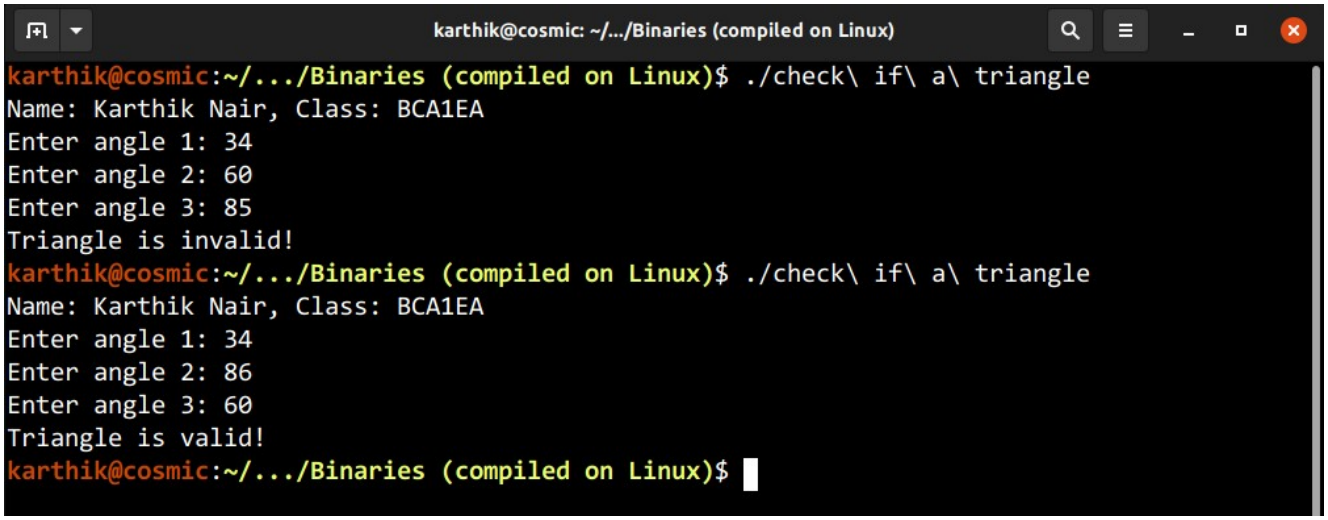
```c
// Write a C program to count total number of notes in given amount

#include <stdio.h>

int main()
{
	printf("Name: Karthik Nair, Class: BCA1EA\n");
	int n;
	printf("Enter amount: ");
	scanf ("%d",&n);
	while (n!=0)
	{
		if (n>=2000)
		{
			printf("%d 2000 notes\n", n/2000);
			n=n%2000;
		}
		else if (n>=500)
		{
			printf("%d 500 notes\n", n/500);
			n=n%500;
		}
		else if (n>=200)
		{
			printf("%d 200 notes\n", n/200);
			n=n%200;
		}
		else if (n>=100)
		{
```

```
                printf("%d 100 notes\n", n/100);
                n=n%100;
            }
            else if (n>=50)
            {
                printf("%d 50 notes\n", n/50);
                n=n%50;
            }
            else if (n>=20)
            {
                printf("%d 20 notes\n", n/20);
                n=n%20;
            }
            else if (n>=10)
            {
                printf("%d 10 notes\n", n/10);
                n=n%10;
            }
            else if (n>=5)
            {
                printf("%d 5 notes\n", n/5);
                n=n%5;
            }
            else if (n>=2)
            {
                printf("%d 2 notes\n", n/2);
                n=n%2;
            }
            else if (n>=1)
            {
                printf("%d 1 notes\n", n/1);
                n=n%1;
            }
        }
}
```



14. Write a C program to input angles of a triangle and check whether triangle is valid or not

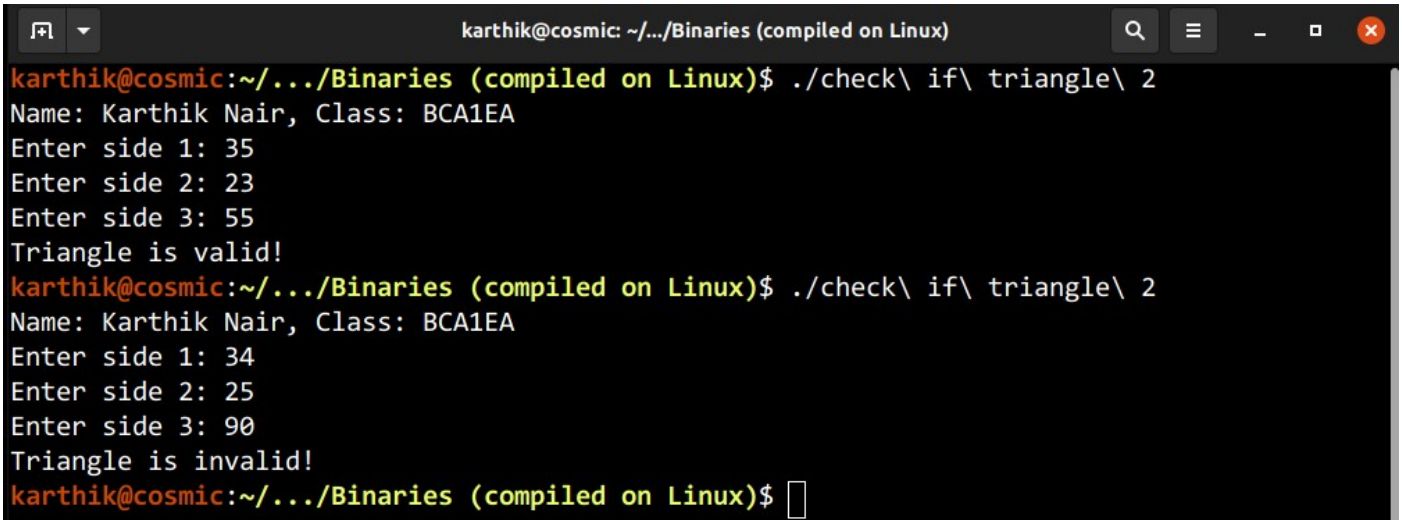
```c
// Write a C program to input angles of a triangle and check whether triangle
is valid or not
#include <stdio.h>

int main()
{
      printf("Name: Karthik Nair, Class: BCA1EA\n");
      int angle1, angle2, angle3;
      printf("Enter angle 1: ");
      scanf("%d", &angle1);
      printf("Enter angle 2: ");
      scanf("%d", &angle2);
      printf("Enter angle 3: ");
      scanf("%d", &angle3);
      if ((angle1+angle2+angle3)==180)
      {
            printf("Triangle is valid!");
      }
      else
      {
            printf("Triangle is invalid!");
      }
      printf("\n");

}
```



15. Write a C program to input all sides of a triangle and check whether triangle is valid or not

```c
// Write a C program to input all sides of a triangle and check whether
triangle is valid or not

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
```

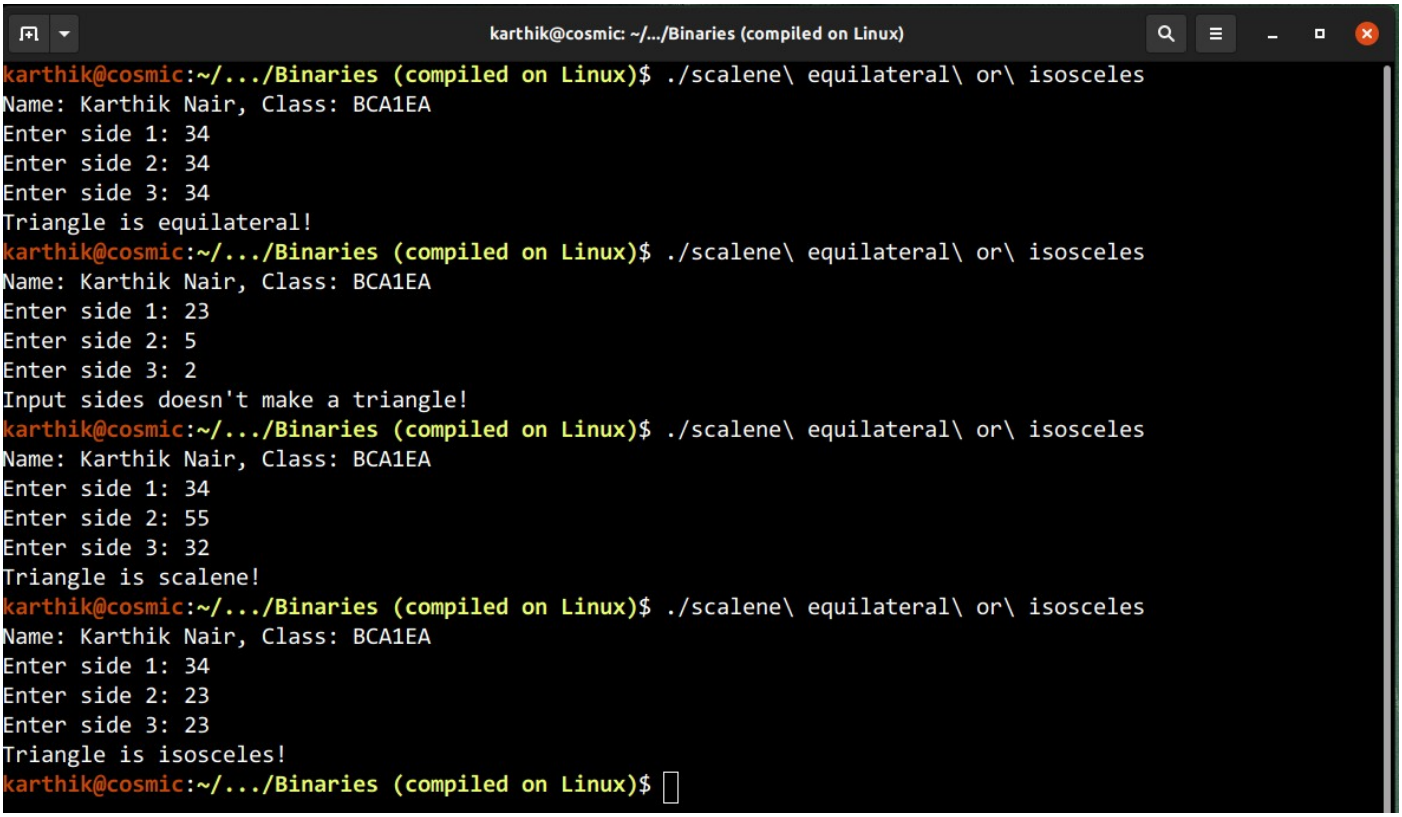
```
    int side1, side2, side3;
    printf("Enter side 1: ");
    scanf("%d", &side1);
    printf("Enter side 2: ");
    scanf("%d", &side2);
    printf("Enter side 3: ");
    scanf("%d", &side3);
    if (((side1+side2)>side3)&&((side2+side3)>side1)&&((side1+side3)>side2))
    {
        printf("Triangle is valid!");
    }
    else
    {
        printf("Triangle is invalid!");
    }
    printf("\n");
}
```



16. Write a C program to check whether the triangle is equilateral, isosceles or scalene triangle

```
// Write a C program to check whether the triangle is equilateral, isosceles or
scalene triangle

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int side1, side2, side3;
    printf("Enter side 1: ");
    scanf("%d", &side1);
    printf("Enter side 2: ");
    scanf("%d", &side2);
    printf("Enter side 3: ");
    scanf("%d", &side3);
    if (((side1+side2)>side3)&&((side2+side3)>side1)&&((side1+side3)>side2))
```

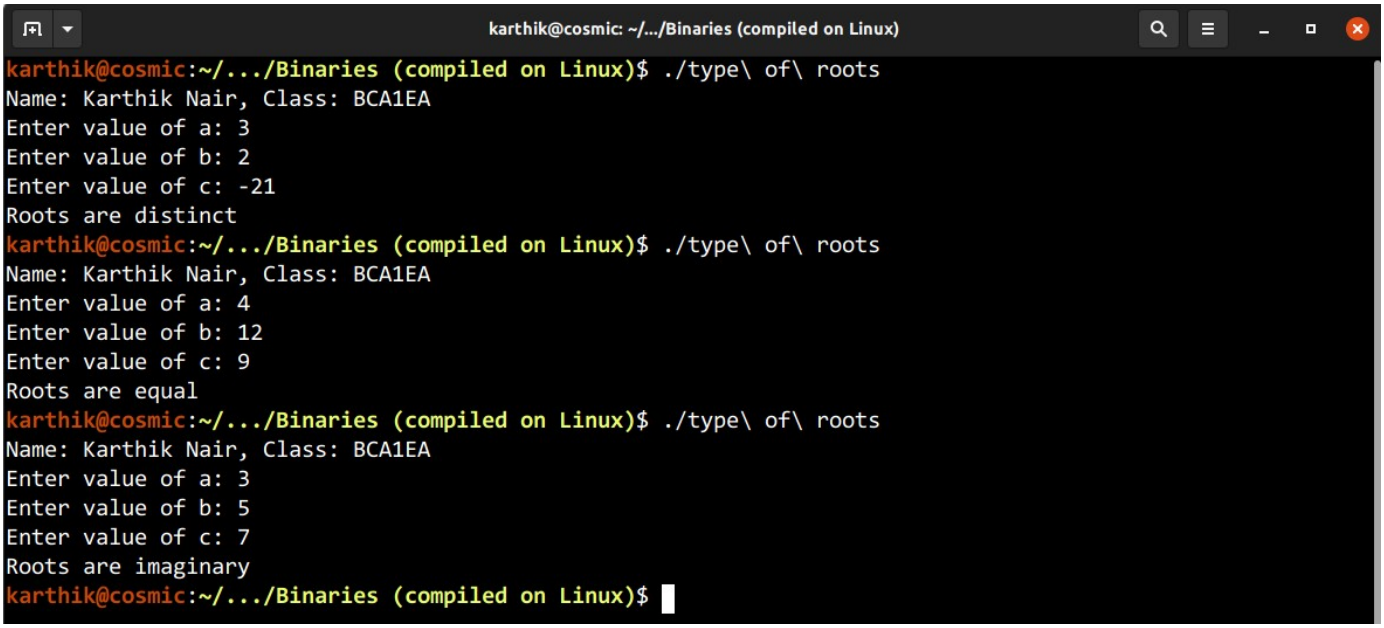
```
    {
        if ((side1!=side2)||(side1!=side3)||(side2!=side3))
        {
            if ((side1==side2)||(side1==side3)||(side2==side3))
            {
                printf("Triangle is isosceles!");
            }
            else
            {
                printf("Triangle is scalene!");
            }
        }
        else
        {
            printf("Triangle is equilateral!");
        }
    }
    else
    {
        printf("Input sides doesn't make a triangle!");
    }
    printf("\n");
}
```



17. Write a C program to find the types roots of a quadratic equation

```
// Write a C program to find the types roots of a quadratic equation

#include <stdio.h>
```

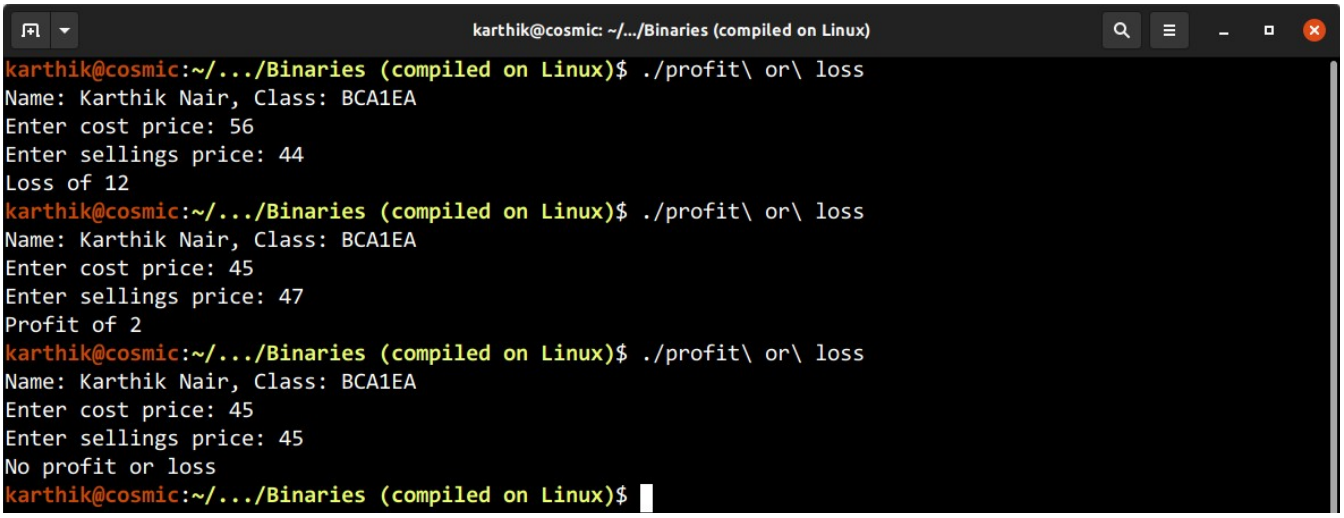
```c
int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a, b, c, d;
    printf("Enter value of a: ");
    scanf("%d", &a);
    printf("Enter value of b: ");
    scanf("%d", &b);
    printf("Enter value of c: ");
    scanf("%d", &c);
    d=((b*b)-(4*a*c));
    if (d>0)
    {
        printf("Roots are distinct");
    }
    else if (d==0)
    {
        printf("Roots are equal");
    }
    else
    {
        printf("Roots are imaginary");
    }
    printf("\n");
}
```



18. Write a C program to calculate profit or loss

```c
// Write a C program to calculate profit or loss

#include <stdio.h>

int main()
{
```

```
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int cp, sp;
    printf("Enter cost price: ");
    scanf("%d", &cp);
    printf("Enter sellings price: ");
    scanf("%d", &sp);
    if (sp>cp)
    {
        printf("Profit of %d", sp-cp);
    }
    else if (sp<cp)
    {
        printf("Loss of %d", cp-sp);
    }
    else
    {
        printf("No profit or loss");
    }
    printf("\n");
}
```

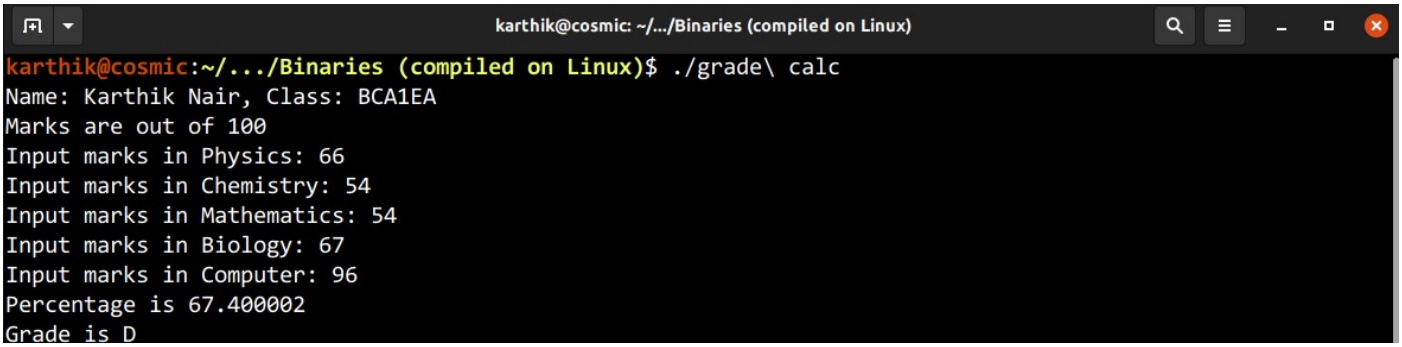


19. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:

Percentage >= 90% : Grade A
Percentage >= 80% : Grade B
Percentage >= 70% : Grade C
Percentage >= 60% : Grade D
Percentage >= 50% : Grade E
Percentage < 40% : Grade F

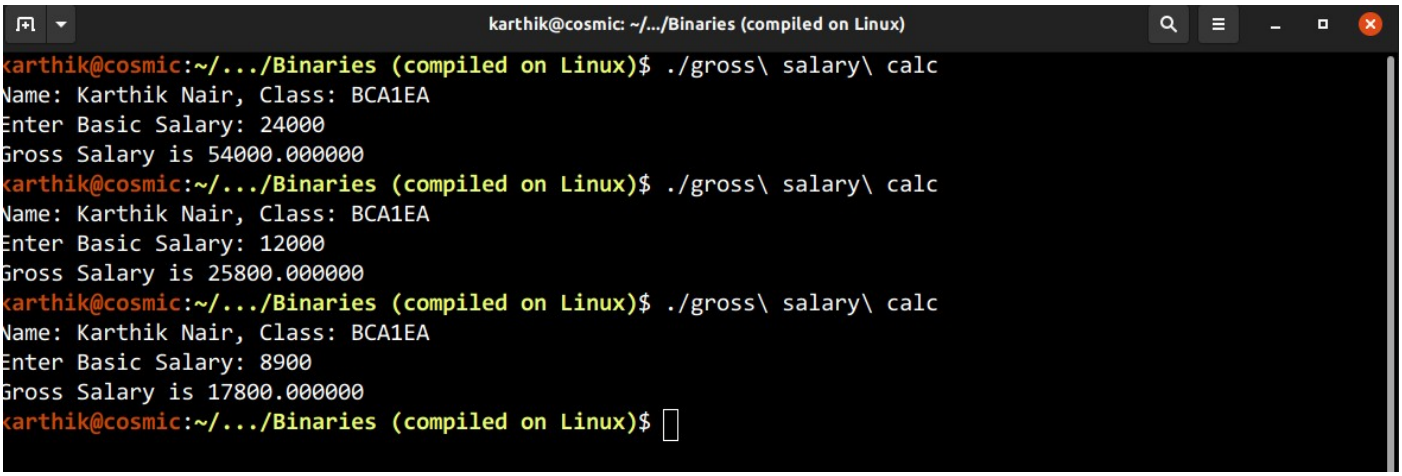
```
/*Write a C program to input marks of five subjects Physics, Chemistry,
Biology, Mathematics and Computer. Calculate percentage and grade according to
following:
 Percentage >= 90% : Grade A
 Percentage >= 80% : Grade B
 Percentage >= 70% : Grade C
 Percentage >= 60% : Grade D
```

```
 Percentage >= 50% : Grade E
 Percentage < 40% : Grade F */

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    float mark1, mark2, mark3, mark4, mark5, percentage;
    printf("Marks are out of 100 \n");
    printf("Input marks in Physics: ");
    scanf("%f", &mark1);
    printf("Input marks in Chemistry: ");
    scanf("%f", &mark2);
    printf("Input marks in Mathematics: ");
    scanf("%f", &mark3);
    printf("Input marks in Biology: ");
    scanf("%f", &mark4);
    printf("Input marks in Computer: ");
    scanf("%f", &mark5);
    percentage=((mark1+mark2+mark3+mark4+mark5)/500)*100;
    printf("Percentage is %f \n", percentage);
    printf("Grade is ");
    if (percentage>=90)
    {
        printf("A");
    }
    else if (percentage>=80)
    {
        printf("B");
    }
    else if (percentage>=70)
    {
        printf("C");
    }
    else if (percentage>=60)
    {
        printf("D");
    }
    else if (percentage>=50)
    {
        printf("E");
    }
    else
    {
        printf("F");
    }
    printf("\n");
}
```



20. Write a C program to input basic salary of an employee and calculate its Gross salary according to following:
Basic Salary <= 10000 : HRA = 20%, DA = 80%
Basic Salary <= 20000 : HRA = 25%, DA = 90%
Basic Salary > 20000 : HRA = 30%, DA = 95%

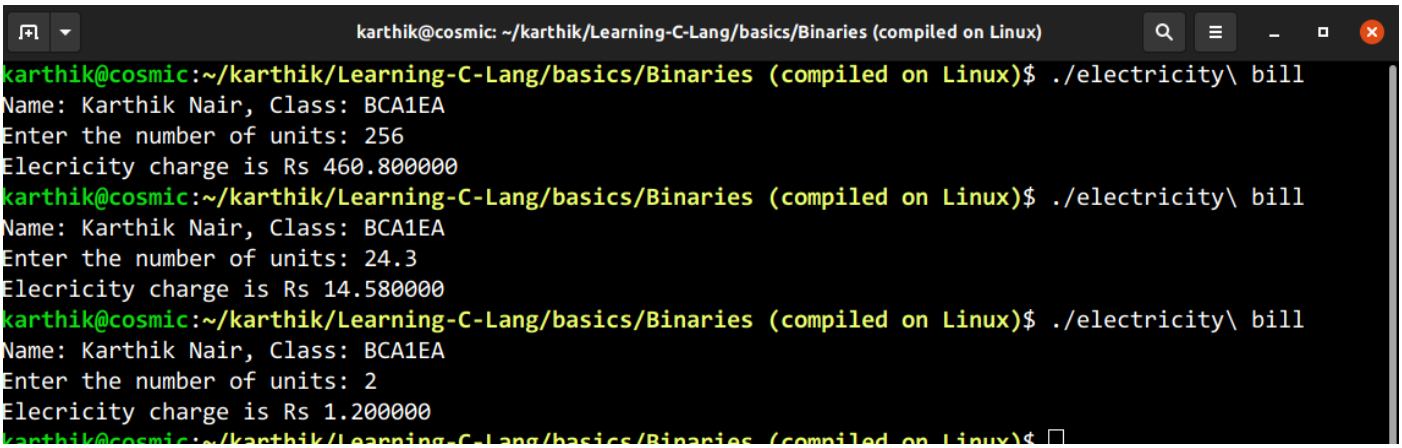
```
/*Write a C program to input basic salary of an employee and calculate its
Gross salary according to following:
 Basic Salary <= 10000 : HRA = 20%, DA = 80%
 Basic Salary <= 20000 : HRA = 25%, DA = 90%
 Basic Salary > 20000 : HRA = 30%, DA = 95% */

 #include <stdio.h>

 int main()
 {
     printf("Name: Karthik Nair, Class: BCA1EA\n");
     float HRA, DA, basic;
     printf("Enter Basic Salary: ");
     scanf("%f", &basic);
     if (basic<=10000)
     {
         DA=(0.8)*basic;
         HRA=(0.2)*basic;
     }
     else if (basic<=20000)
     {
         DA=(0.9)*basic;
         HRA=(0.25)*basic;
     }
     else
     {
         DA=(0.95)*basic;
         HRA=(0.3)*basic;
     }
     printf("Gross Salary is %f\n", basic+HRA+DA);
 }
```



21. Write a C program to input electricity unit charges and calculate total electricity bill according to the given conditions:
For first 50 units Rs. 0.50/unit
For next 100 units Rs. 0.75/unit
For next 100 units Rs. 1.20/unit
For unit above 250 Rs. 1.50/unit
An additional surcharge of 20% is added to the bill

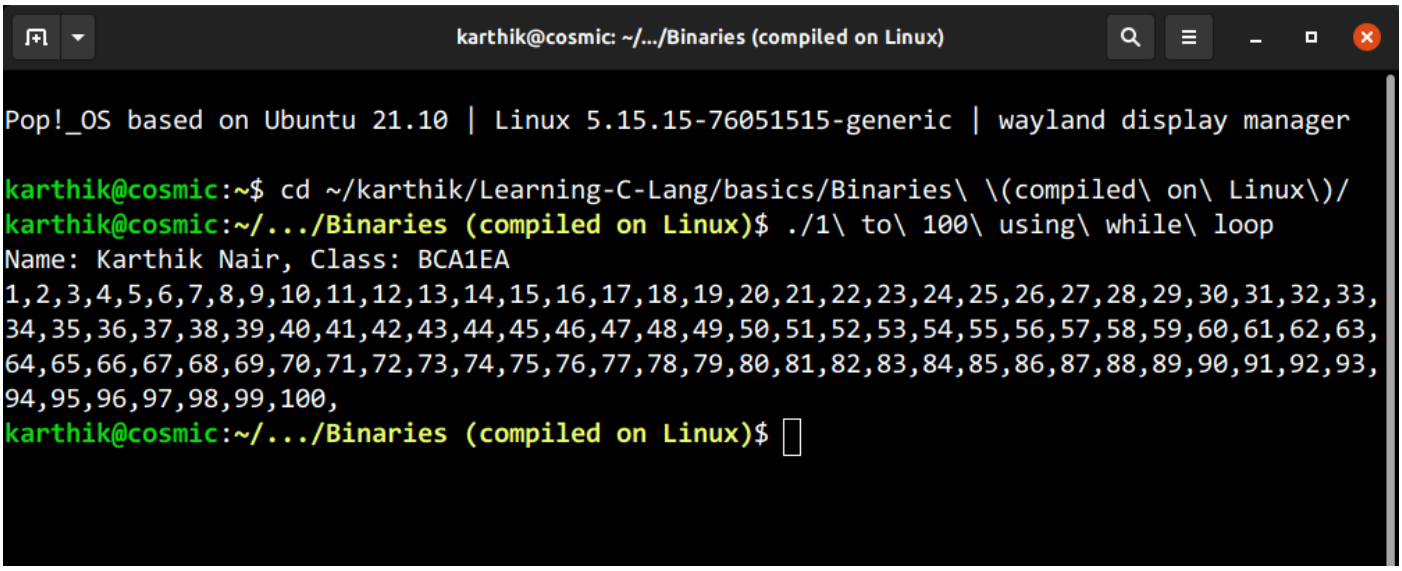
```
/*Write a C program to input electricity unit charges and calculate total
electricity bill according to the given conditions:
 For first 50 units Rs. 0.50/unit
 For next 100 units Rs. 0.75/unit
 For next 100 units Rs. 1.20/unit
 For unit above 250 Rs. 1.50/unit
 An additional surcharge of 20% is added to the bill*/

 #include <stdio.h>

 int main()
 {
     printf("Name: Karthik Nair, Class: BCA1EA\n");
     float units, cost;
     printf("Enter the number of units: ");
     scanf("%f", &units);
     if (units<=50)
     {
         cost=0.5;
     }
     else if (units<=150)
     {
         cost=0.75;
     }
     else if (units<=250)
     {
         cost=1.2;
     }
     else
     {
```

```
        cost=1.5;
    }
    printf("Elecricity charge is Rs %f", (0.2*(units*cost))+(units*cost));
    printf("\n");
}
```



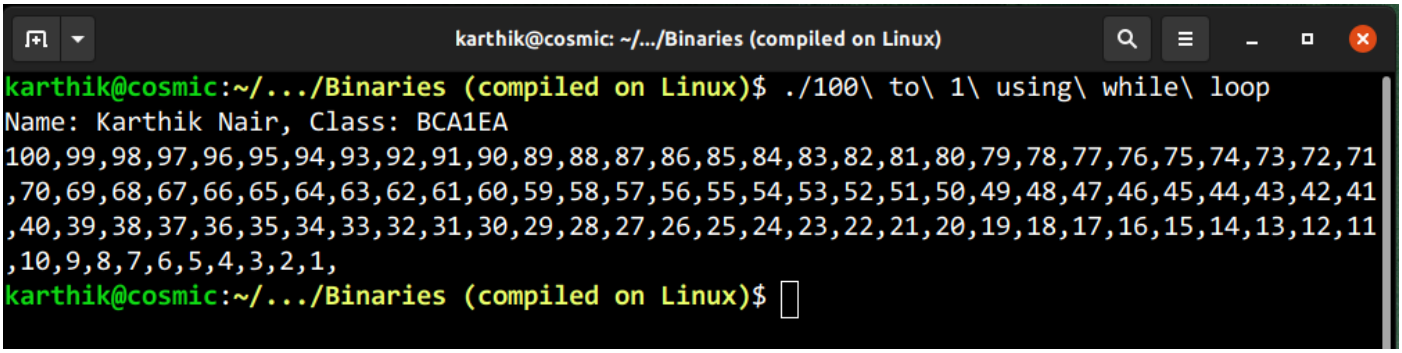
22. Display counting from 1 to 100 using while loop

```
// Display counting from 1 to 100 using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int start=1, end=100;
    while (start<=end)
    {
        printf("%d,", start);
        start++;
    }
    printf("\n");
}
```



23. Display counting from 100 to 1 using while loop

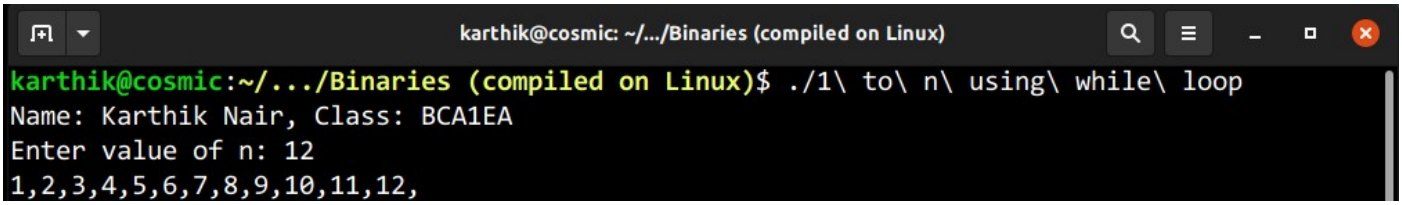
```c
// Display counting from 100 to 1 using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int start=100, end=1;
    while (start>=end)
    {
        printf("%d,", start);
        start--;
    }
    printf("\n");
}
```



24. Display counting from 1 to n using while loop

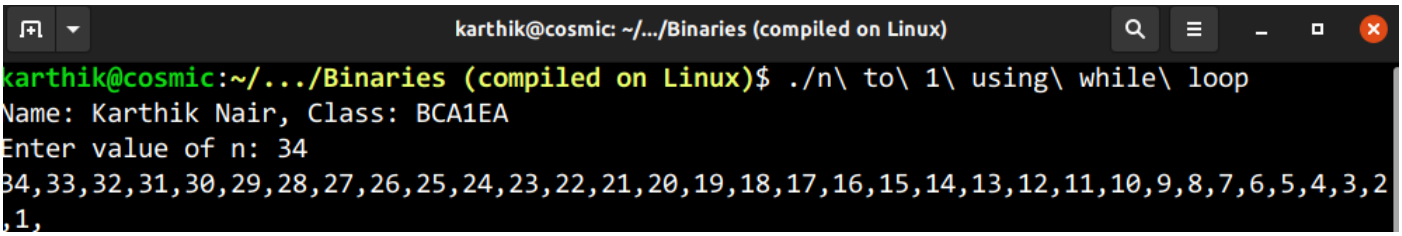
```c
// Display counting from 1 to n using while loop

#include <stdio.h>
```

```c
int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=1, n;
    printf("Enter value of n: ");
    scanf("%d", &n);
    while (a<=n)
    {
        printf("%d,", a);
        a++;
    }
    printf("\n");
}
```



25. Display counting from n to 1 using while loop

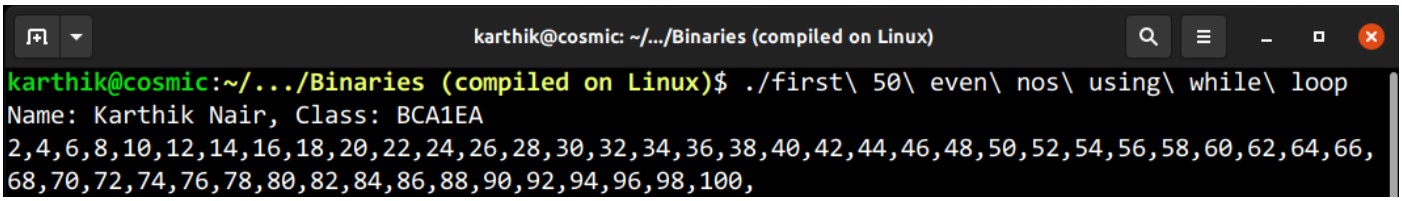
```c
// Display counting from n to 1 using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=1, n;
    printf("Enter value of n: ");
    scanf("%d", &n);
    while (a<=n)
    {
        printf("%d,", n);
        n--;
    }
    printf("\n");
}
```



26. Display first 50 even nos. Using while loop

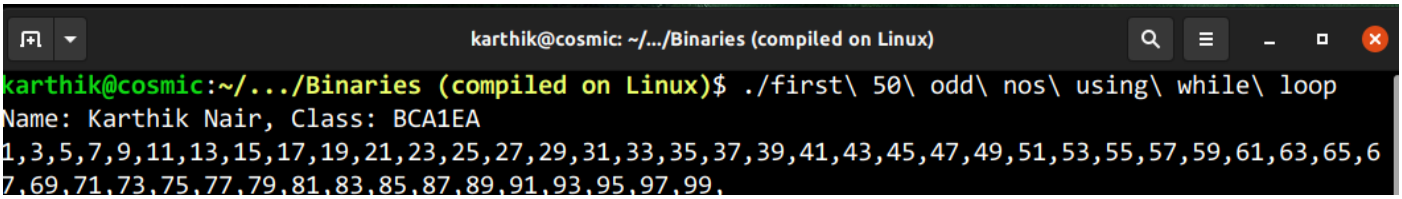
```c
// Display first 50 even nos. Using while loop
```

```c
#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=2, n=100;
    while (a<=n)
    {
        printf("%d,", a);
        a+=2;
    }
    printf("\n");
}
```



27. Display first 50 odd nos. Using while loop

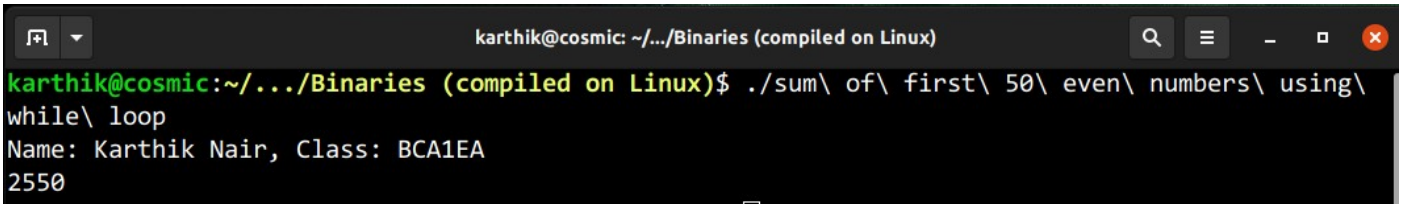
```c
// Display first 50 odd nos. Using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=1, n=99;
    while (a<=n)
    {
        printf("%d,", a);
        a+=2;
    }
    printf("\n");
}
```



28. Display sum of first 50 even nos. Using while loop

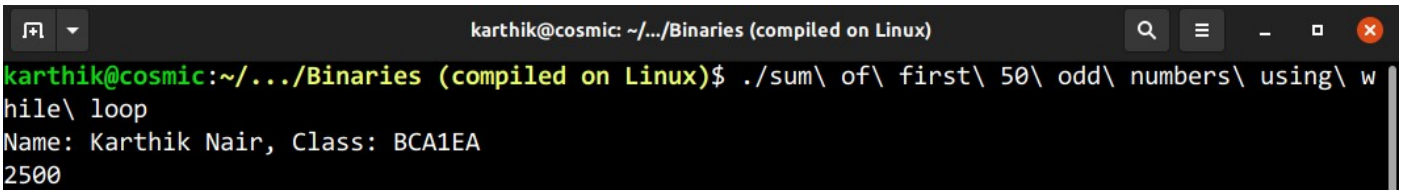
```c
// Display sum of first 50 even nos. Using while loop

#include <stdio.h>

int main()
```

```
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=2, n=100, sum=0;
    while (a<=n)
    {
        sum+=a;
        a+=2;
    }
    printf("%d\n", sum);
}
```



29. Display sum of first 50 odd nos. Using while loop

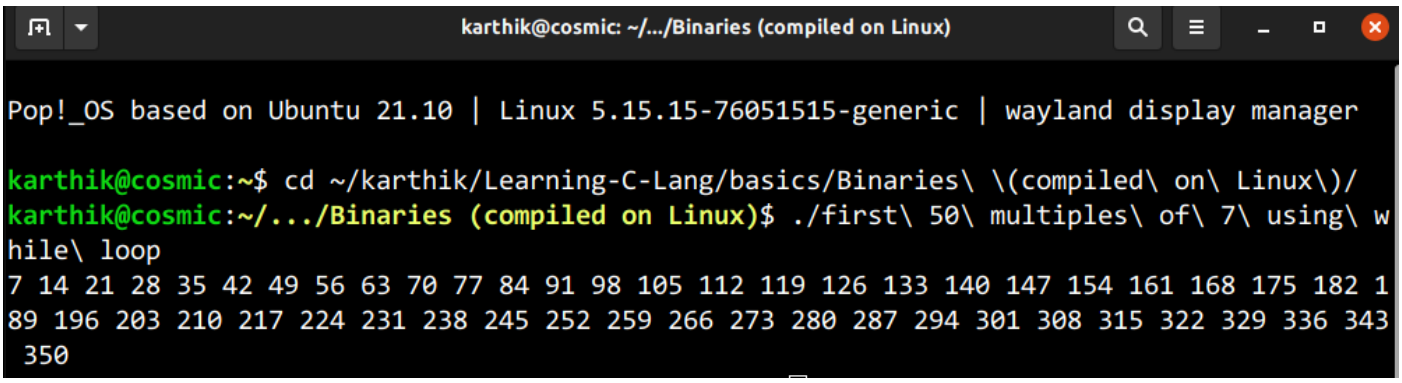
```
// Display sum of first 50 odd nos. Using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=1, n=99, sum=0;
    while (a<=n)
    {
        sum+=a;
        a+=2;
    }
    printf("%d\n", sum);
}
```



30. Display first 50 multiples of 7 Using while loop

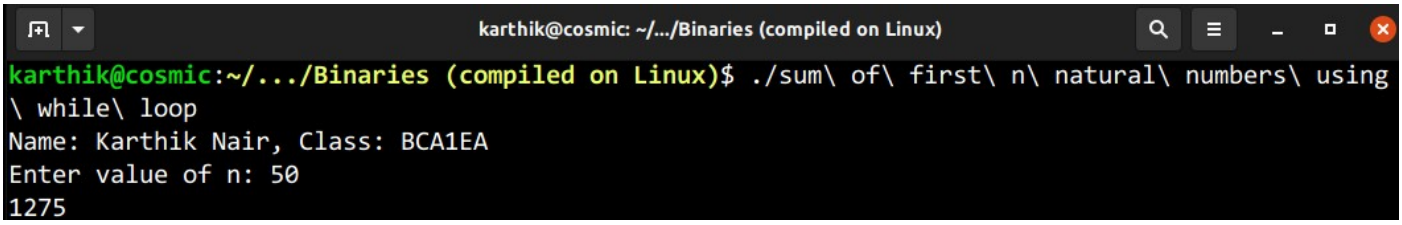
```
// Display first 50 multiples of 7 Using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int  count=1, a=7;
```

```
    while (count<=50)
    {
        printf("%d ",a);
        a+=7;count++;
    }
    printf("\n");
}
```



31. Display sum of first n natural nos. Using while loop

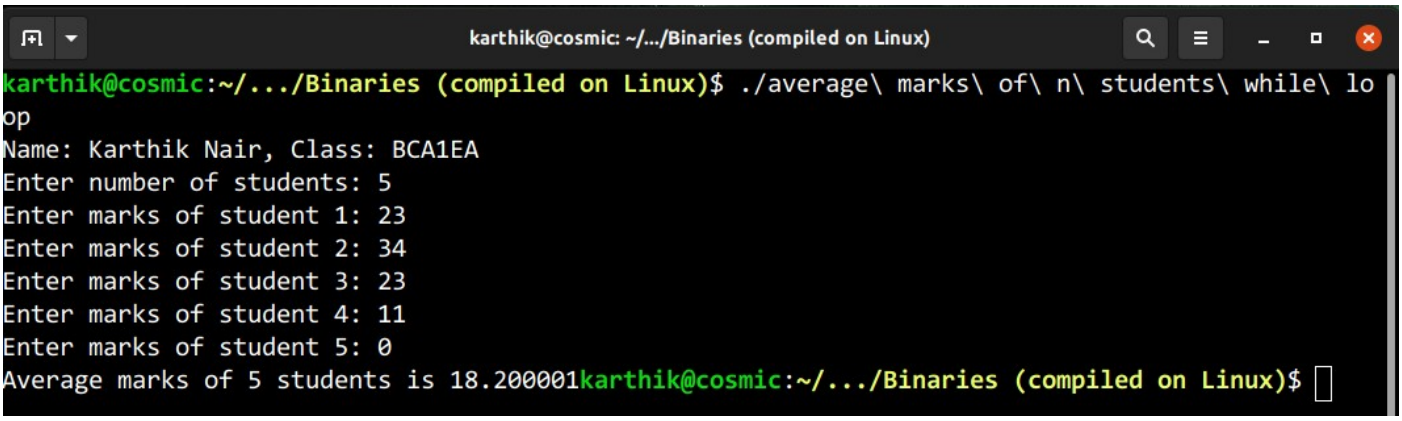
```
// Display sum of first n natural nos.  Using while loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=1, n, sum=0;
    printf("Enter value of n: ");
    scanf("%d",&n);
    while (a<=n)
    {
        sum+=a;
        a++;
    }
    printf("%d\n", sum);
}
```



32. Display average marks of n number of students, take inputs from user Using while loop

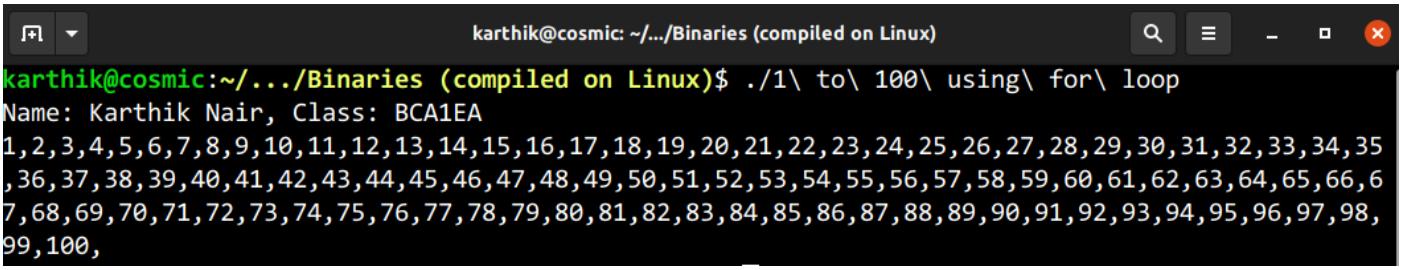
```
// Display average marks of n number of students, take inputs from  user Using while loop

#include <stdio.h>
```

```c
int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int n, marks, count=1; float sum=0;
    printf("Enter number of students: ");
    scanf("%d", &n);
    while (n>=count)
    {
        printf("Enter marks of student %d: ", count);
        scanf("%d", &marks);
        count++;sum+=marks;
    }
    printf("Average marks of %d students is %f", n, (sum/n));
}
```



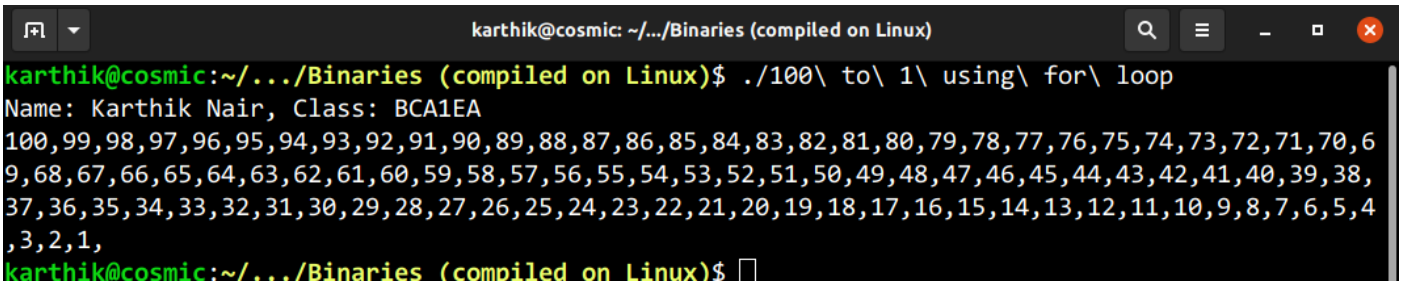
33. Display counting from 1 to 100 using for loop

```c
// Display counting from 1 to 100 using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i;
    for (i = 1; i <= 100; i++)
        printf("%d,", i);
    printf("\n");
}
```



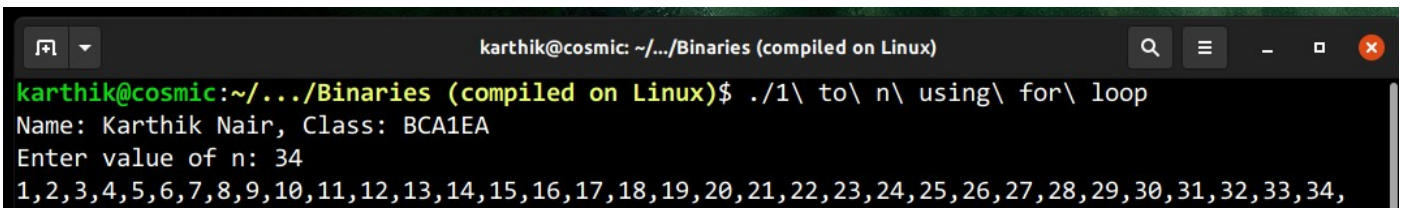
34. Display counting from 100 to 1 using for loop

```c
// Display counting from 100 to 1 using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i;
    for (i = 100; i >= 1; i--)
        printf("%d,", i);
    printf("\n");
}
```



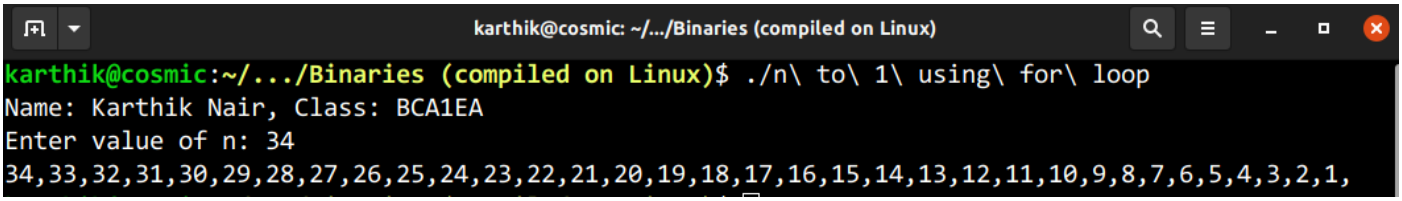
35. Display counting from 1 to n using for loop

```c
// Display counting from 1 to n using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=1,n;
    printf("Enter value of n: ");
    scanf("%d",&n);
    for (i;i<=n;i++)
    {
        printf("%d,",i);
    }
    printf("\n");
}
```



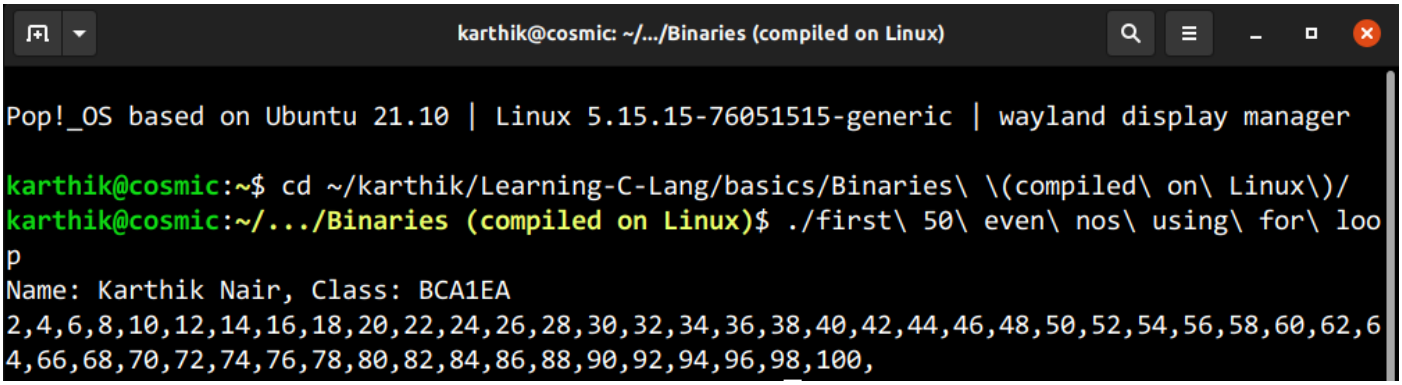
36. Display counting from n to 1 using for loop

```c
// Display counting from n to 1 using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=1,n;
    printf("Enter value of n: ");
    scanf("%d",&n);
    for (n;n>=i;n--)
    {
        printf("%d,",n);
    }
    printf("\n");
}
```



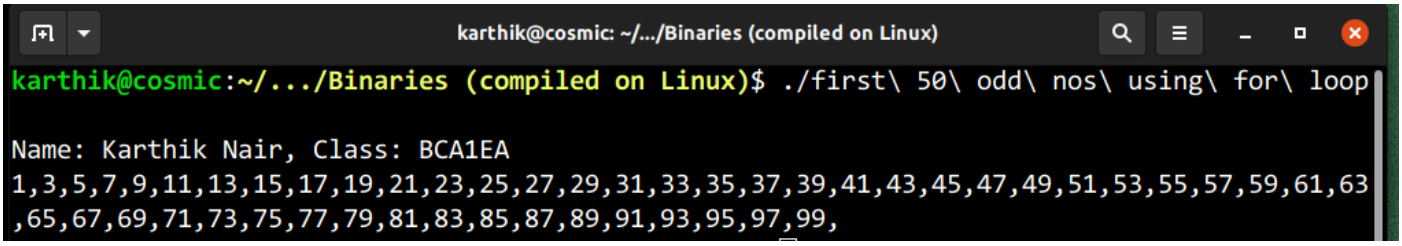
37. Display first 50 even nos. Using for loop

```c
// Display first 50 even nos. Using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=2;
    for (i; i<=100; i+=2)
    {
        printf("%d,", i);
    }
    printf("\n");
}
```



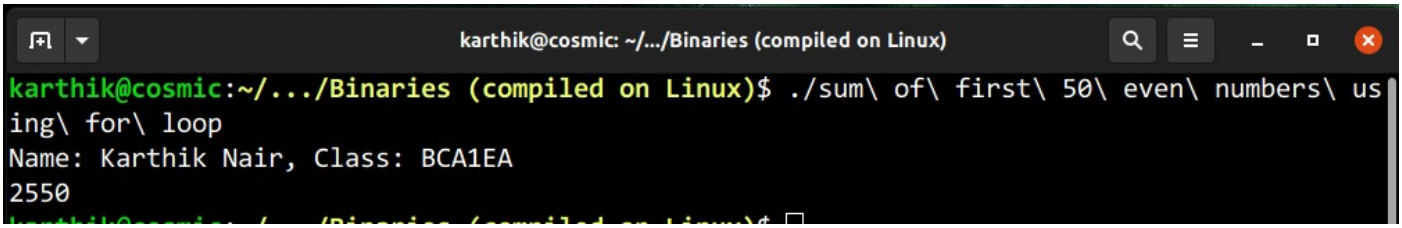
38. Display first 50 odd nos. Using for loop

```c
// Display first 50 odd nos. Using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=1;
    for (i; i<=99; i+=2)
    {
        printf("%d,", i);
    }
    printf("\n");
}
```



39. Display sum of first 50 even nos. Using for loop

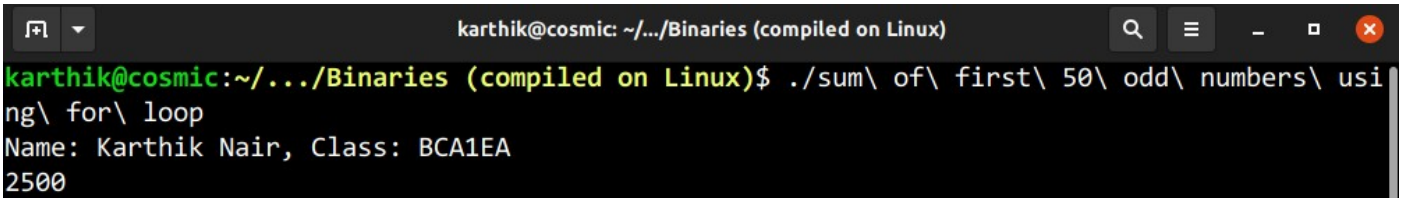
```c
// Display sum of first 50 even nos. Using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=2,sum=0;
    for (i;i<=100;i+=2)
    {
        sum+=i;
    }
    printf("%d\n",sum);
}
```



40. Display sum of first 50 odd nos. Using for loop

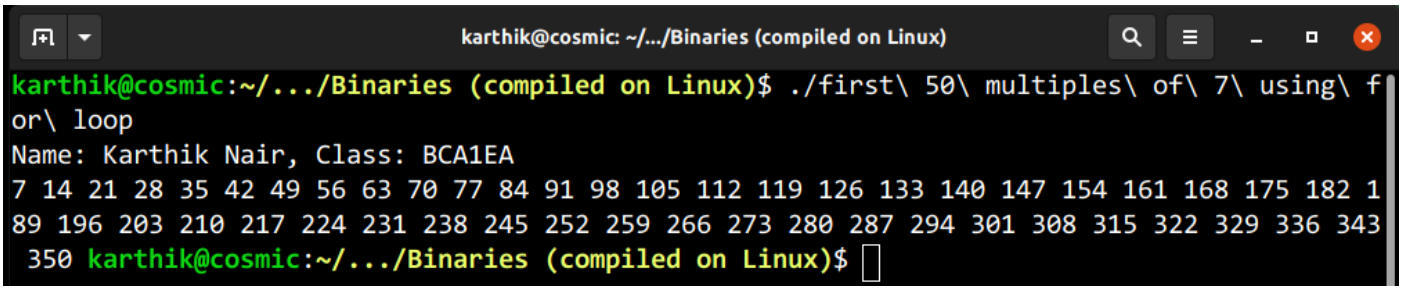
```c
// Display sum of first 50 odd nos. Using for loop
```

```c
#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=1,sum=0;
    for (i;i<=99;i+=2)
    {
        sum+=i;
    }
    printf("%d\n",sum);
}
```



41. Display first 50 multiples of 7 using for loop

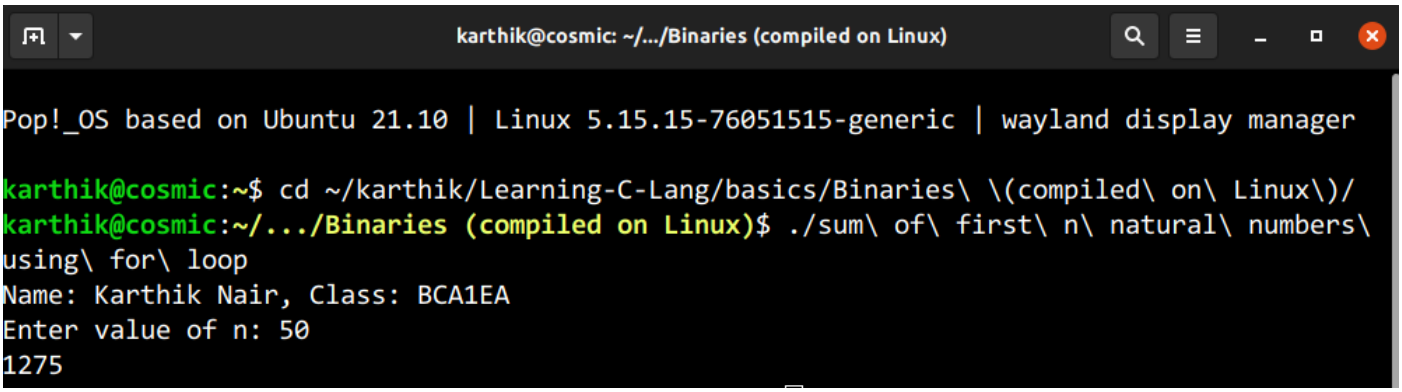
```c
// Display first 50 multiples of 7 using for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int a=7;
    for (a; a<=(7*50); a+=7)
    {
        printf("%d ", a);
    }
}
```



42. Display sum of first n natural nos. using for loop

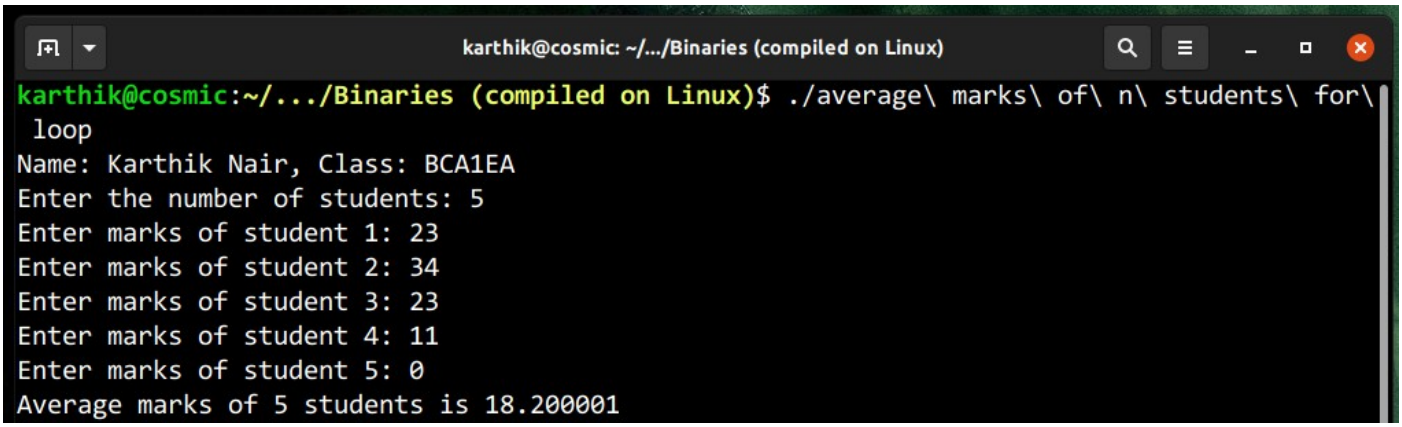
```c
// Display sum of first n natural nos. using for loop

#include <stdio.h>

int main()
```

```
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int n, sum=0;
    printf("Enter value of n: ");
    scanf("%d", &n);
    for (n; n>=1; n--)
    {
        sum+=n;
    }
    printf("%d\n", sum);
}
```



43. Display average marks of n number of students, take inputs from user using for loop

```
// Display average marks of n number of students, take inputs from user using
for loop

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int n, marks, i=1;
    float sum=0;
    printf("Enter the number of students: ");
    scanf("%d", &n);
    for (i; n>=i; i++)
    {
        printf("Enter marks of student %d: ", i);
        scanf("%d", &marks);
        sum += marks;
    }
    printf("Average marks of %d students is %f\n", n, sum/n);
}
```



44. Display the following pattern on screen: (Up to n rows)

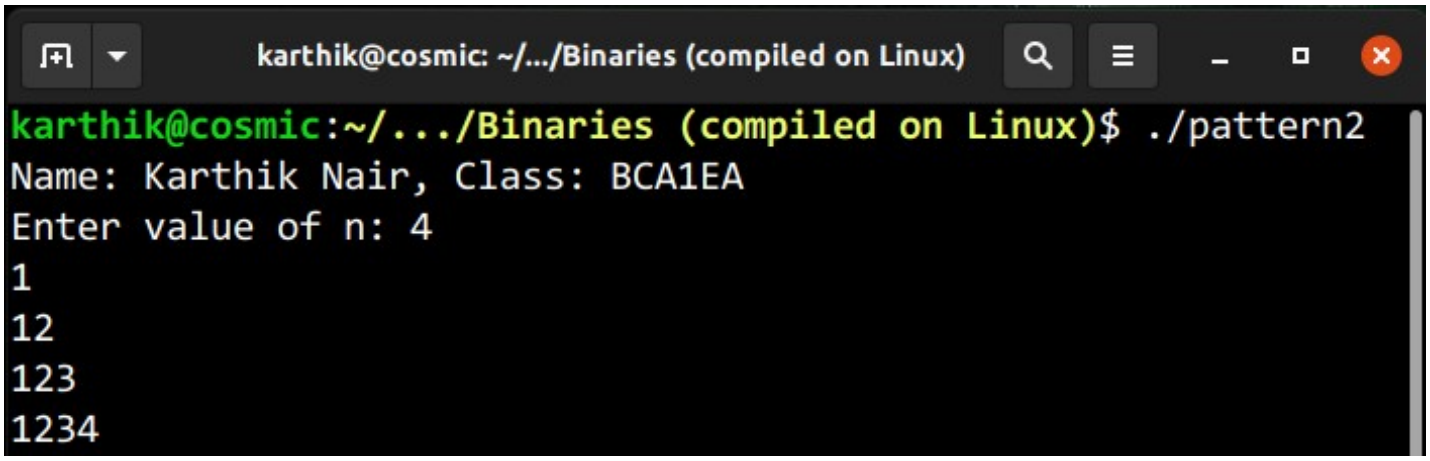
```
*
**
***
```

```
/*Display the following pattern on screen: (Up to n rows)

*
**
****/

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i, n, j;
    printf("Enter value of n: ");
    scanf("%d", &n);
    for (i=1; i<=n; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("*");
        }
        printf("\n");
    }
}
```

45. Display the following pattern on screen: (Up to n rows)

1
1 2
1 2 3
1 2 3 4 …

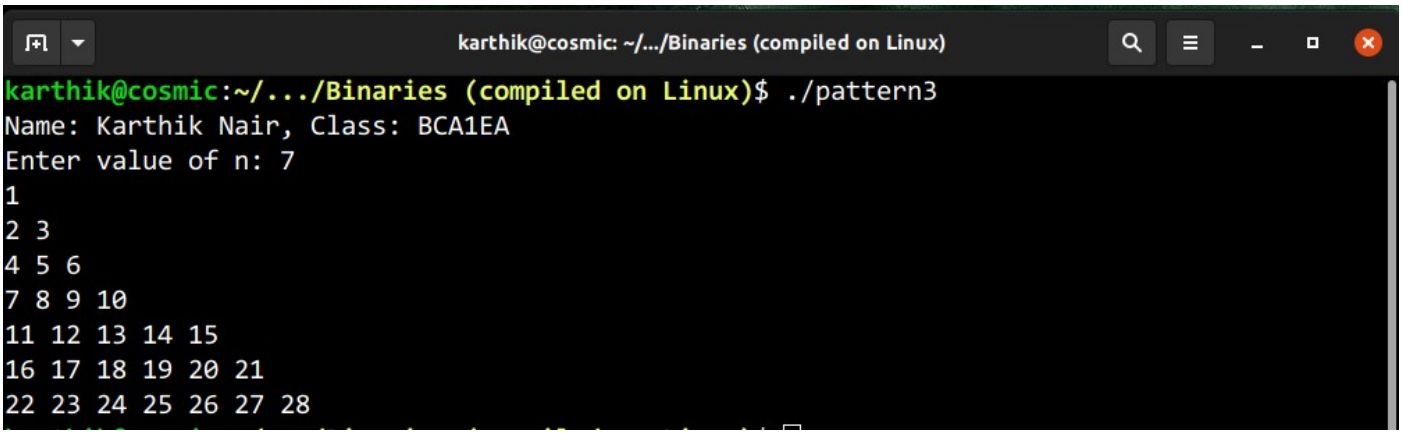
```
/*Display the following pattern on screen: ( Up to n rows)

1
1 2
1 2 3
1 2 3 4 … */

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i, n, j;
    printf("Enter value of n: ");
    scanf("%d", &n);
    for (i=1; i<=n; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%d", j);
        }
        printf("\n");
    }
}
```



46. Display the following pattern (Floyd's Triangle) on screen: (Up to n rows)

1
2 3
4 5 6
7 8 9 10…

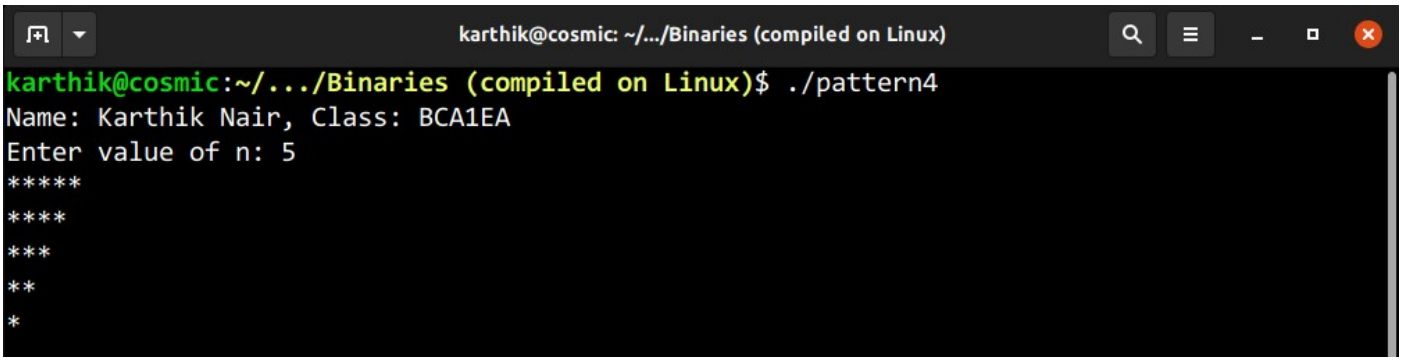
```
/*Display the following pattern (Floyd's Triangle) on screen: ( Up to n rows)
1
2 3
4 5 6
7 8 9 10… */


#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=1, j=1, n=1, r;
    printf("Enter value of n: ");
    scanf("%d", &r);
    for (i=1; i<=r; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%d ", n);
            n++;
        }
        printf("\n");
    }
}
```



47. Display the following pattern on screen: (Up to n rows)

```
*****
****
***
**
*
```

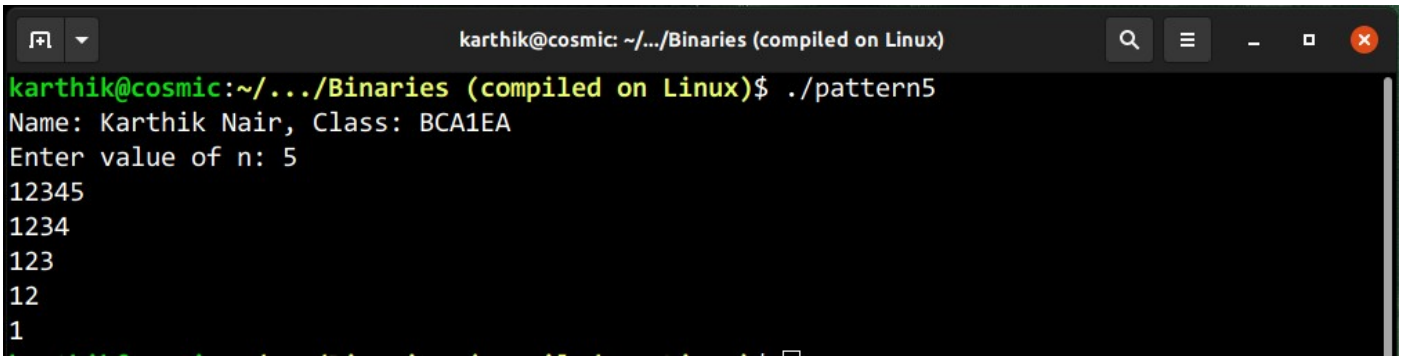
```
/*Display the following pattern on screen: ( Up to n rows)

*****
****
***
**
*

*/

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i, n, j;
    printf("Enter value of n: ");
    scanf("%d", &n);
    for (n; i<=n; n--)
    {
        for (j=1; j<=n; j++)
        {
            printf("*");
        }
        printf("\n");
    }
}
```



48. Display the following pattern on screen: (Up to n rows)

1 2 3 4 5
1 2 3 4
1 2 3
1 2
1

```
/*Display the following pattern on screen: ( Up to n rows)

1 2 3 4 5
1 2 3 4
1 2 3
1 2
1

*/

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i, n, j;
    printf("Enter value of n: ");
    scanf("%d", &n);
    for (i=1; i<=n; n--)
    {
        for (j=1; j<=n; j++)
        {
            printf("%d", j);
        }
        printf("\n");
    }
}
```



49. Display the following pattern on screen: (Up to n rows)

A
B B
C C C
D D D D

```
/*Display the following pattern on screen: ( Up to n rows)

A
B B
C C C
D D D D*/

#include <stdio.h>

int main()
{
    printf("Name: Karthik Nair, Class: BCA1EA\n");
    int i=1,j=1,n;
    char a='A';
    printf("Enter value of n: ");
    scanf("%d",&n);
    for (i=1;i<=n;i++)
    {
        for (j=1; j<=i; j++)
        {
            printf("%c ", a);

        }
        a++;
        printf("\n");
    }
}
```

50. Display the following pattern on screen (inverted full pyramid): (Up to n rows)

```
* * * * * * * * *
 * * * * * * *
  * * * * *
   * * *
    *
```

```
/*50. Display the following pattern on screen( inverted full pyramid): ( Up to
n n)

* * * * * * * * *
  * * * * * * *
    * * * * *
     * * *
       *

*/

#include <stdio.h>
int main()
{
  printf("Name: Karthik Nair, Class: BCA1EA\n");
  int i,j,n,k,m=1;
  printf("Enter value of n: ");
  scanf("%d", &n);
  for (i=n;i >= 1;i--)
  {
    for (j=1;j<=m;j++)
    {
      printf("  ");
    }
    for (k=1;k<=(2*i-1);k++)
    {
      printf("* ");
    }
    m++;
    printf("\n");
  }
}
```


karthik@cosmic: ~/.../Binaries (compiled on Linux)
karthik@cosmic:~/.../Binaries (compiled on Linux)$ ./pattern7
Name: Karthik Nair, Class: BCA1EA
Enter value of n: 6
* * * * * * * * * * *
* * * * * * * * *
* * * * * * *
* * * * *
* * *
*