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| **BCA Semester-VI**  **Assignment-1**  **Basic Kotlin Programs**  **Date: 22/12/2021** | |
| 1. | Write a program to display “Hello World” message.  **fun main()**  **{**  **println("hello world")**  **}** |
| 2. | Write a program to display your full name, address and mobile number.  **fun main()**  **{**  **println("priyank vadgama")**  **println("b-1 shastri society ,piplag")**  **println("9265498492")**  **}** |
| 3. | Write a program to demonstrate the use of var and val keywords of Kotlin.  **fun main()**  **{**  **var a=1**  **val b=2**  **println("$a and $b")**  **}** |
| 4. | Write a program to take to declare two integer types of variables and display sum of them.  **fun main()**  **{**  **var a=40**  **var b=10**  **val c=a+b**  **println("sum is" +c)**  **}** |
| 5. | Write a program to demonstrate the use of string interpolation.  **fun main()**  **{**  **var a:Int=10**  **var b:Int=20**  **val c=a+b**  **println("sum of $a and $b is: ${a+b}")**  **}** |
| 6. | Write a program to demonstrate the usage of arithmetic operators.  **fun main()**  **{**  **var a:Int=10**  **var b:Int=20**  **var c=a+b**  **println("sum of $a and $b is: ${a+b}")**  **println("sub $a and $b is: ${a-b}")**  **println("multi $a and $b is: ${a\*b}")**  **println("div $a and $b is: ${a/b}")**  **println("modulo $a and $b is: ${a%b}")**  **}** |
| 7. | Write a program to demonstrate relational operators.  **fun main()**  **{**  **var a=10**  **var b=12**  **println (a>b)**  **println (a<b)**  **println (a==b)**  **println (a!=b)**  **}** |
| 8. | Write a program to demonstrate logical operators.  **fun main()**  **{**  **var academics=70**  **var knowsprogramming=true**  **if (academics>50 && knowsprogramming)**  **{**  **println("selected")**  **}**  **else**  **{**  **println("better luck next time")**  **}**  **}** |
| 9. | Write a program to take one integer variable and check weather value of variable fall under specified range or not. (use .. and until operators)  **fun main()**  **{**  **var a=50**  **var flag= a in 1..50**  **println(flag)**  **}**  *\\ using until*  **fun main()**  **{**  **var a=50**  **var flag= a in 1 until 50**  **println(flag)**  **}** |
| 10. | Write a program to take simple string from user and display the string Inputed by user in console.  **fun main()**  **{**  **println("Input a Number: ")**  **// var a:Int = readLine().toInt()**  **var i:Int = 10;**  **if(i in 1..10)**  **{**  **println("Value Fall into Range (In)...")**  **}**  **else**  **{**  **println("Value Not Fall into Range (In)...")**  **}**    **if(i in 1 until 10)**  **{**  **println("Value Fall into Range (Untill)...")**  **}**  **else**  **{**  **println("Value Not Fall into Range (Untill)...")**  **}**  **}** |
| 11. | Write a program to read integer inputs from user using Scanner class, perform some arithmetic operation on it and display the output to the console.  **import java.util.Scanner**  **fun main()**  **{**  **val scan : Scanner = Scanner (System.`in`)**  **println("Input First Number: ")**  **var a:Int = scan.nextInt()**  **println("Input Second Number: ")**  **var b:Int = scan.nextInt()**  **var a=5; var b=5;**  **println("Add, Sub, Multiple and Div of $a and $b is Respectively ${a+b}, ${a-b}, ${a\*b}, ${a/b}")**  **}** |
| 12. | Write a program to demonstrate the usage of type conversion function available in Kotlin.  **import java.util.Scanner**  **fun main()**  **{**  **println("Input a Number: ")**  **var a:Int = readLine().toInt()**  **var a = "10"**  **var n = 0**  **n = a.toInt()**  **println("String to Integer: "+n)**  **var c: Double = 41.5;**  **var f = c.toFloat()**  **println("Double to Float: "+f)**  **var d = (f.toDouble()+1.25555)**  **println("Float to Double: "+d)**  **}** |
| 13. | Write a program to find the area of a circle.  **fun main()**  **{**  **println("Input Radius: ")**  **var radius:Double = readLine().toDouble()**  **var radius:Double = 10.0;**  **var PI = 3.14;**  **println("Area of Circle is: ${PI\*radius\*radius}");**  **}** |
| 14. | Write a program to find the area of a triangle.  **fun main()**  **{**  **println(“Input Height: ")**  **var a:Double = readLine().toDouble()**  **println("Input Base: ")**  **var b:Double = readLine().toDouble()**  **var a:Double = 10.0;**  **var b:Double = 20.0;**  **println("Area of Triangle is: ${0.5 \* a \* b}");**  **}** |
| 15. | Write a program to find the percentage of 5 subjects.  **fun main()**  **{**  **println("Input Subject 1 Marks: ")**  **var m1:Int = readLine().toInt()**  **println("Input Subject 2 Marks: ")**  **var m2:Int = readLine().toInt()**  **println("Input Subject 3 Marks: ")**  **var m3:Int = readLine().toInt()**  **println("Input Subject 4 Marks: ")**  **var m4:Int = readLine().toInt()**  **println("Input Subject 5 Marks: ")**  **var m5:Int = readLine().toInt()**  **var m1:Int = 80**  **var m2:Int = 77**  **var m3:Int = 87**  **var m4:Int = 66**  **var m5:Int = 45**  **var total = m1+m2+m3+m4+m5**  **var percentage: Double = (total/5.0)**  **println("Marks of Subject 1: ${m1}")**  **println("Marks of Subject 2: ${m2}")**  **println("Marks of Subject 3: ${m3}")**  **println("Marks of Subject 4: ${m4}")**  **println("Marks of Subject 5: ${m5}")**    **println("\nTotal is: $total \nPercentage is: $percentage");**  **}** |
| 16. | Write a program to find greatest number of two numbers.  **fun main()**  **{**  **println("Input Number 1: ")**  **var n1:Int = readLine().toInt()**  **println("Input Number 2: ")**  **var n2:Int = readLine().toInt()**  **var n1:Int = 80**  **var n2:Int = 99**  **if(n1>n2)**  **println("Greater Number Between $n1 and $n2 is: $n1.")**  **else if(n1<n2)**  **println("Greater Number Between $n1 and $n2 is: $n2.")**  **else**  **println("Both The Numbers Are Same.")**  **}** |
| 17. | Write a program to find greatest number of three numbers.  **fun main()**  **{**  **println("Input Number 1: ")**  **var n1:Int = readLine().toInt()**  **println("Input Number 2: ")**  **var n2:Int = readLine().toInt()**  **println("Input Number 3: ")**  **var n3:Int = readLine().toInt()**  **var n1:Int = 98**  **var n2:Int = 20**  **var n3:Int = 45**  **if(n1>n2 && n1>n3)**  **println("Greater Number Between $n1, $n2 and $n3 is: $n1.")**  **else if(n2>n3)**  **println("Greater Number Between $n1, $n2 and $n3 is: $n2.")**  **else**  **println("Greater Number Between $n1, $n2 and $n3 is: $n3.")**  **}** |
| 18. | Write a program to check whether Inputed number is even or odd.  **fun main()**  **{**  **println("Input Number for Check: ")**  **var n1:Int = readLine().toInt()**  **var n1:Int = 8**  **if(n1%2!=0)**  **println("Number is ODD.")**  **else**  **println("Number is EVEN")**  **}** |
| 19. | Write a program to check whether year Inputed by the user is leap year or not.  **fun main()**  **{**  **println("Input Year: ")**  **var year:Int = readLine().toInt()**  **var year:Int = 2025**  **if((year%4==0) && ((year%100!=0) || (year%400==0)))**  **println("Year is Leap Year")**  **else**  **println("Year is Not a Leap Year")**  **}** |
| 20. | Write a program to check whether number Inputed by user is 100, less than 100 or greater than 100.  **fun main()**  **{**  **println("Input Number: ")**  **var number:Int = readLine().toInt()**  **var number:Int = 100**  **if(number>100)**  **println("Number is Greater than 100.")**  **else if(number<100)**  **println("Number is Less than 100.")**  **else**  **println("Number is 100.")**  **}** |
| 21. | Check whether a number is negative, positive or zero.  **fun main()**  **{**  **println("Input Number: ")**  **var number:Int = readLine().toInt()**  **var number:Int = -89**  **if(number>0)**  **println("Number is Positive.")**  **else if(number<0)**  **println("NUmber is Negative.")**  **else**  **println("Number is Zero.")**  **}** |
| 22. | Write a program to print 1 to 10 number using while loop.  **fun main()**  **{**  **var i=1**  **while(i<=10)**  **{**  **println(i)**  **i++**  **}**  **}** |
| 23. | Write a program to print 1 to 10 number using for loop.  **fun main()**  **{**  **for (a in 1 .. 10)**  **{**  **println(a)**  **}**  **}** |
| 24. | Write a program to print even numbers between 1 to 10 using for loop.  **fun main()**  **{**  **for (a in 2 .. 10 step 2)**  **{**  **println(a)**  **}**  **}** |
| 25. | Write a program to print off numbers between 1to 10 using for loop.  **fun main()**  **{**  **for (a in 1 .. 10 step 2)**  **{**  **println(a)**  **}**  **}** |
| 26. | Write a program to print table of a number Inputed by user using for loop.  import java.util.Scanner  **fun main()**  **{**  **var sc=Scanner(System.`in`)**  **println("Input Number: ")**  **var x= sc.nextInt()**  **for (y in 1 .. 10)**  **{**  **println("$t X $i = ${x\*y}")**  **}**  **}** |
| 27. | Write a program to check whether Inputed number by user is prime or not.  **import java.util.Scanner;**  **fun main()**  **{**  **var scan=Scanner(System.`in`)**  **var flag : Boolean = false**  **println("Input The Number: ")**  **var no = scan.nextInt()**  **for (a in 2 until no)**  **{**  **if (no%a==0)**  **{**  **println("Number is not Prime")**  **break;**  **}**  **else**  **flag = true**  **}**  **if (flag)**  **println("Number is Prime")**  **}** |
| 28. | Display Fibonacci Series Using for loop.  **import java.util.Scanner;**  **fun main()**  **{**  **var scan=Scanner(System.`in`)**  **var x=0**  **var y=1**  **var z=0**  **println("Input the number of elements:");**  **var number= scan.nextInt()**  **println(x)**  **println(y)**  **for(a in 1 .. number)**  **{**  **z=x+y;**  **println(z);**  **x=y;**  **y=z;**  **}**  **}** |
| 29. | Check Number Is Armstrong Or Not using While Loop.  **import java.util.Scanner;**  **fun main()**  **{**  **var scan=Scanner(System.`in`)**  **println("Input the number to Check:");**  **var number= scan.nextInt()**  **var temp=number**  **var d=0**  **var r=0**  **var sum=0**  **do**  **{**  **r=number%10**  **number = number/10**  **sum += (r\*r\*r)**  **}**  **while (number>0)**  **if(sum==temp)**  **println("Number is Armstrong!!")**  **else**  **println("Number is Not Armstrong!!")**  **}** |
| 30. | Reverse the number using while loop.  fun main()  **{**  **for (a in 10 downTo 1)**  **{**  **println(a)**  **}**  } |