***Running kotlin projects in Android studio***

1. Open Android studio
2. Select New project
3. No activity
4. Give it a name, language kotlin, build configuration language Kotlin DSL
5. From the app Select Android -> app and in the first package -> right click new Kotlin class/file (file) and give it a name

***Kotlin syntax***

fun main (){ The entry point of a Kotlin program (fun = function)

}

**fun main (){**

**println(“Hello my friends”)**

**}**

***Output***

On the left side of the function select the run button

***Comments***

//single line

/\* \*/ multiline comments

***Variables***

[type + name + initial value]

var key word used to declare a mutable variable

val keyword used to declare an immutable variable

**var myAge : Int = 25**

**val pi : Double = 3.14159**

**Type inference**

You can make a variable without telling the type and Kotlin will infer it

**var myAge = 25**

***Note:*** to concatenate use “ + ”

***Data types***

***A diagram of a computer code

AI-generated content may be incorrect.***

***Numbers***

* Byte
* Short
* Int
* Long

***Decimals***

* Float
* Double

***Boolean***

* **true**
* **false**

***Characters***

Represent single character

“char”

***Operators***

***A screenshot of a computer

AI-generated content may be incorrect.***

***Strings***

val text: String = “”

val text = “”

val text3 = text1 + text2 Concatenate

val name = “Jack”

val age = 30 template ($) calls the other variable

val info = “my name is $name and I am $age years old”

val x = 5

val y = 3 String interpolation

val result = “The sum of $x and $y is ${x + y}”

val text = “Welcome to my world”

val length = text.length functions and properties

val subText = text.substring(0 , 7)

val result = “The sum of $x and $y is ${x + y}”

val str1 = “Hello”

val str2 = “Hi” String comparison

val comparisonResult = str1.equals(str2)

val str1 = “Hello my \n age is” \n represents a newline

***Conditionals***

* if
* if-else
* When (is the switch of here)

Val day = 3

When(day){

1 -> println(“Monday”)

2 -> println(“thuesday”)

3 -> println(“Wednesday”)

Else -> println(“Unknown day”)

}

***Loops***

* For

For(i in 1.. 5){

}

* While

Var count = 0

While (count < 5){

Println(“Count: $count”)

Count++

}

* Do-while

The loop is executed at least once

Var x = 1

Do{

Println(“This will be printed at least once..”)

X++

} While(x < 0)

***Break and continue keywords***

* Break
* Continue

***Arrays***

Array declaration

Val osName = arrayOf(“Windows”, “Android”, “MacOS”, “Linux”)

Accessing elements

Val firstElement = osNames[0]

Modifying elements

osNames[1] = “iOS”

Size

osName.size

Iterating through an array

for(name in osNames){

println(name)

}

For each loop

OsNames.forEach{ name -> println(name)}

Range

Close range

Val range = 1..5

Half open range

Val range2 = 1 until 5 do not include the end value

Iterating through a specific range

For (I in range2){

Println(i)

}