Google Developer Student Clubs

WELCOME TO ANDROID STUDY JAMS

"An app is not all about technology

It is a dream towards future"

ANDROID

Google Developer Student Clubs

What is GDSC ?

Google Developer Student Clubs (GDSC) are community groups for college and university students interested in Google developer technologies.By joining a GDSC, students grow their knowledge in a peer-to-peer learning environment and build solutions for local businesses and their community.

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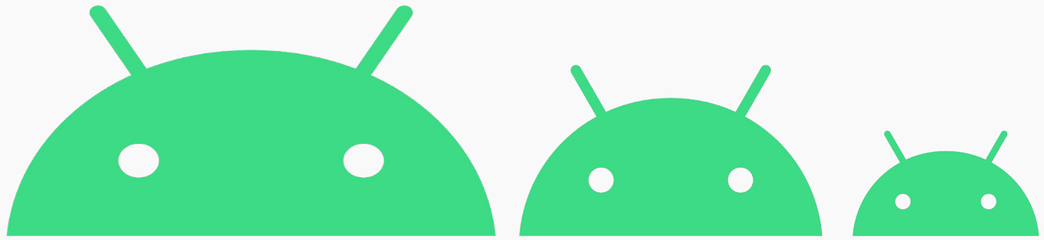
What are Android Study Jams?

Android Study Jams are community-organized study groups for people to do hands-on learning for Android app development.

Android Basics is a series of sessions focused specifically on learning how to build Android apps without prior Android experience.



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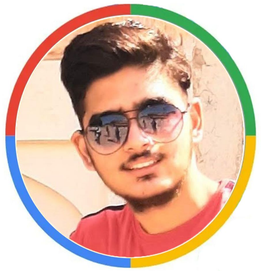
Team Members

Google Developer Student Clubs
National Institute of Technology Hamirpur



Abhi Khandelwal

Team Lead
Android

Google Developer Student Clubs
National Institute of Technology Hamirpur

Shreyansh Jain

Team Member
Android

Google Developer Student Clubs
National Institute of Technology Hamirpur

Rashika Dubey

Team Member
Android

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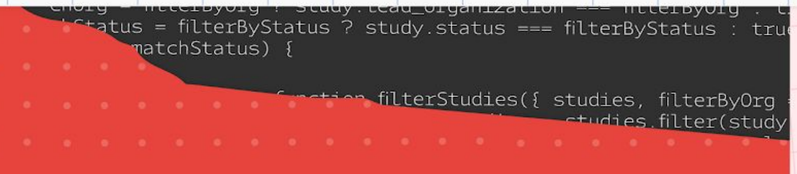
Why should we attend Android Study Jams ?

- **Virtual badges on Google Developers profile on completion of each unit of the course**
- **Certificate of Completion signed by facilitators after completion of the course**
- **Selected apps will be showcased in blog format or on social media**

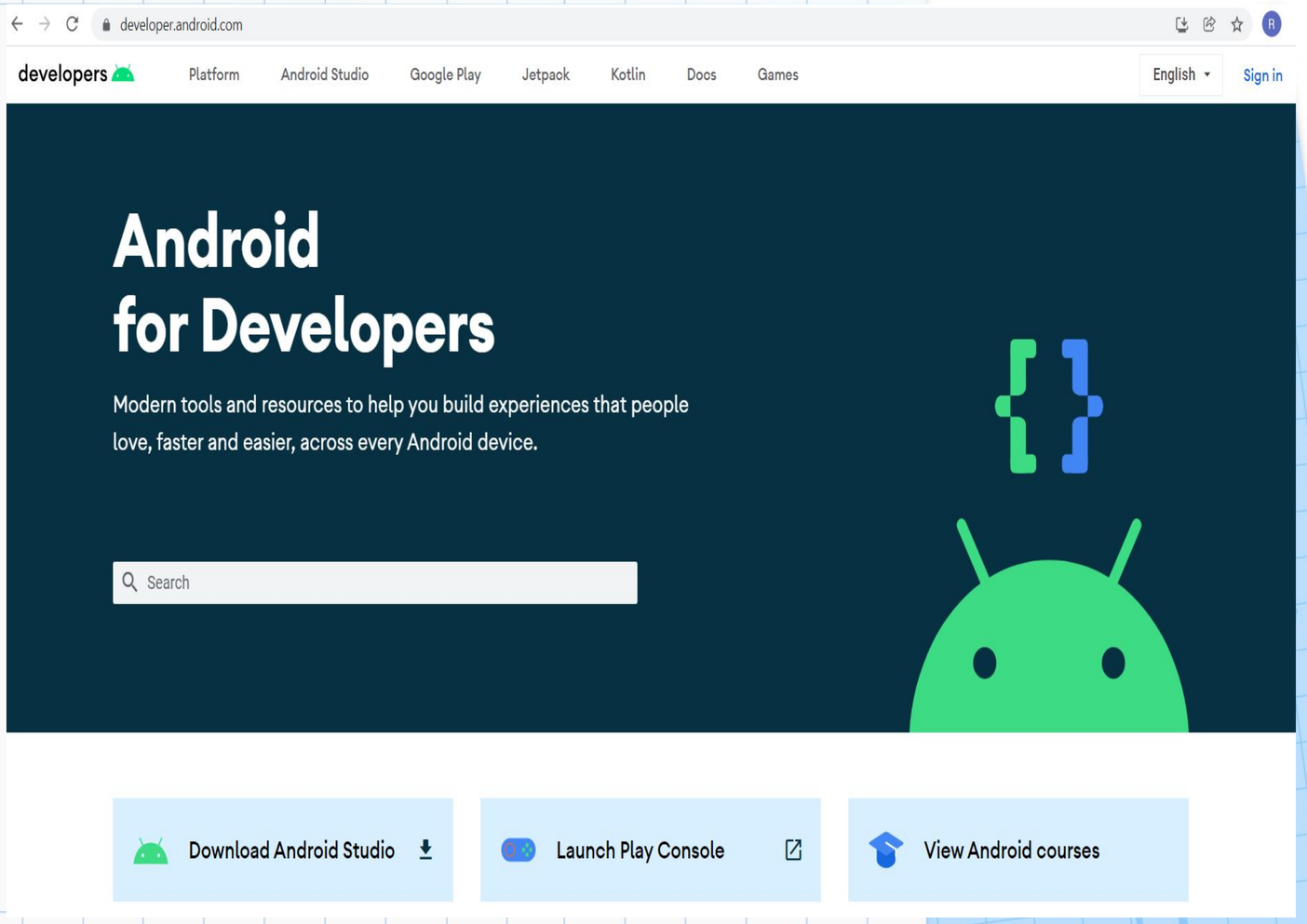


Why Android ?

Imagine tons of data, marvelous videos, sensitive information and much more at your Hand.

UNIQUE FEATURES:

- **Ease of notifications**
- **Simple and powerful SDK**
- **Multi-tasking.**



Prerequisites

- 1. Laptop/PC
- 2. Good Internet Connection
- 3. Android Studio
- 4. (Optional) Android Device and USB Cable
- 5. Enthusiasm to be an Android Developer

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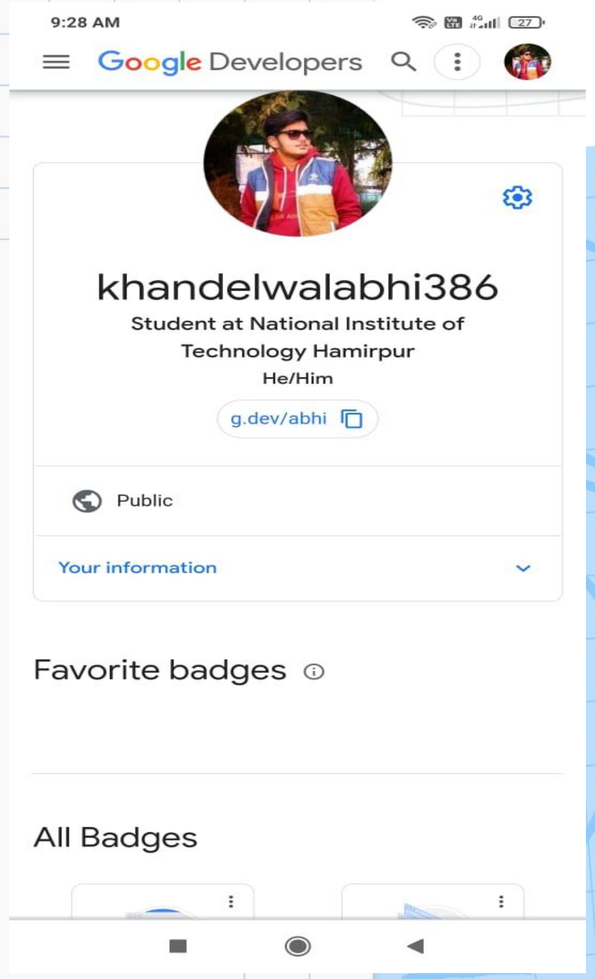
How to start your journey ?

To start, you need to create a Developer profile. (https://google.dev/u/new)

Why create Google Developer Profile?

1)Collect upto 16 badges as you learn.

2)Showcase and share your achievements.



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TIMELINE

18 DEC

Getting started with Android.

19 DEC

Build your first App.

ASSIGNMENT WEEK

Connect to the Internet

25 DEC

Advance Android Programming

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Android Study Jams

Unit 1: Kotlin basics

Take your first steps programming in Kotlin, add images and text to your Android apps, and learn how to use classes, objects, and conditionals to create an interactive app for your users.

1. **Welcome to Android Basics in Kotlin**
   Video *Optional*
2. **Build your first Android app in Kotlin**
   Video *Optional*
3. **Write your first program in Kotlin**
   Codelab
4. **Create a birthday message in Kotlin**
   Codelab

Badges

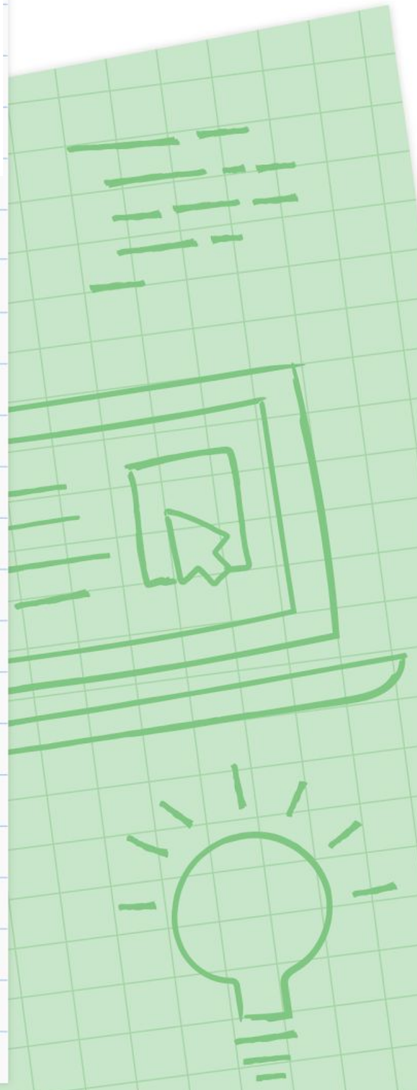
Earn badges at the end of each pathway!

android

Why Kotlin as Dev Language

Kotlin

- Kotlin is expressive, statically typed language for development on android and server.
- It was developed by JetBrains in 2010 which is free, open source and has 5.8 million developers around the world.
- Google made Kotlin as first preferred language for developing apps.
- Provides Null safety



Interesting facts about kotlin

- 62% of developers have expressed interest in developing in kotlin(4th largest according to stack overflow survey.)
- 20% less time is spent on stabilisation after adopting kotlin due to less null pointer exception.
- 30% less code as compared to java
- 70% of top 1000 apps on playstore are developed in kotlin.
- 60% professional android developers use kotlin.

HELLO WORLD !

```
fun main() {
    println("Hello, World!")
    print("Welcome To ")
    print("Android Workshop !!")
}
```

```
Hello, World!
Welcome To Android Workshop !!
```

VAR and VAL

```
var a: String = "GDSC" //mutable variable
println(a)
val b: Int = 1          //immutable variable
val c = 3
println(b)
println(c)
```

```
GDSC
1
3
```

If - else

```
val status = "complete"
if(status=="complete"){
   println("You sucessully earned badges")
}
else{
   println("Please complete your task")
}
```

```
You sucessully earned badges
```

When

```
fun main() {
    cases("Hello")
    cases(1)
    cases(0L)
    cases(MyClass())
    cases("hello")
}

fun cases(obj: Any) {
    when (obj) {
        1 -> println("One")
        "Hello" -> println("Greeting")
        is Long -> println("Long")
        !is String -> println("Not a string")
        else -> println("Unknown")
    }
}

class MyClass
```

```
Greeting
One
Long
Not a string
Unknown
```

ARRAYS

```
val versionNames = arrayOf("Kitkat","Lollipop","Marshmallow",
                           "Nougat","Oreo","Pie")

print(versionNames)
```

LOOPS

```
val  teams = arrayOf("Android", "Flutter", "Google Cloud","Machine Learning","Web Development")

for (team in teams) {
    println("Welcome, it's a $team Session!")
}
```

```
Welcome, it's a Android Session!
Welcome, it's a Flutter Session!
Welcome, it's a Google Cloud Session!
Welcome, it's a Machine Learning Session!
Welcome, it's a Web Development Session!
```

FUNCTION

```
fun printMessage(message: String): Unit {
    println(message)
}

fun printMessageWithPrefix(message: String, prefix: String = "Info") {
    println("[$prefix] $message")
}

fun main() {
    printMessage("Hello")
    printMessageWithPrefix("Hello", "Log")
    printMessageWithPrefix(prefix = "Log", message = "Hello")
}
```

```
Hello
[Log] Hello
[Log] Hello
```

CLASSES

```
class Customer

class Contact(val id: Int, var email: String)

fun main() {

    val customer = Customer()

    val contact = Contact(1, "user1@gmail.com")

    println(contact.id)
    contact.email = "user2@gmail.com"
}
```

```
1
```

Required Setup

STEPS TO DOWNLOAD :

1. **Write download android studio on google.**
2. **Click on the first link that appears .**

LINK:
https://developer.android.com/studio#downloads

Platform	Android Studio package	Size	SHA-256 checksum
Windows (64-bit)	android-studio-2020.3.1.26-windows.exe Recommended	914 MiB	d9181ae1668fc4a5f3a19aa5a2f9951f022bff1359a70aa0f0e7987e248c740c
	android-studio-2020.3.1.26-windows.zip No .exe installer	922 MiB	218cc88562f06ddb5c4b61e0d7059d37688e91e9af55ab0a7bd2c0485050bd4b
Mac (64-bit)	android-studio-2020.3.1.26-mac.dmg	950 MiB	7da10ce0c3e998393045f6de3c37df46bd95e3bacb3f803d63fd85bc67148d6e
Mac (64-bit, ARM)	android-studio-2020.3.1.26-mac_arm.dmg	947 MiB	19688e19df59f37ce1d4b2b339d0c81dbc8f443fb2c8cbe4d6e4178cc70f935a
Linux (64-bit)	android-studio-2020.3.1.26-linux.tar.gz	935 MiB	344d858235ed5d3095ac25916a4a8f8730069f76e5a5fd0eba02522af88f541b
Chrome OS	android-studio-2020.3.1.26-cros.deb	812 MiB	e2a45256658fbac21248c1f9cd6afda46860478dd012c39b95964097307b03a4

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