

Experiment Title- 1.1

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Section/Group-20BCS_NTPP_DM_605

Semester:6

Date of Performance: 09/02/2023

Subject Name: MAD Lab

Subject Code: 20CSP-356

1. Aim: Installing & Running Applications on Android Studio.

2. Theory:

Android is an open-source mobile operating system developed by Google. It is designed primarily for touchscreen mobile devices such as smartphones and tablets, but it can also be used on other types of devices such as smartwatches, televisions, and cars. Android is based on the Linux kernel and provides a framework that allows developers to create applications and services that can run on Android-powered devices.

Android has a user-friendly interface with a variety of features such as customizable home screens, support for widgets, and a wide range of apps available on the Google Play Store. It also includes built-in security features such as application sandboxing and the ability to control app permissions.

Android Studio is the name of the official Integrated Development Environment (IDE) for building Android applications. Android Studio, which is based on the robust code editor and developer tools from IntelliJ IDEA, offers additional features that increase your efficiency when creating Android apps, such as:

-
- A flexible Gradle-based build system
 - A fast and feature-rich emulator
 - A unified environment where you can develop for all Android devices
 - Apply Changes to push code and resource changes to your running app without restarting your app
 - Code templates and GitHub integration to help you build common app features and import sample code
 - Extensive testing tools and frameworks
 - Lint tools to catch performance, usability, version compatibility, and other problems
 - C++ and NDK support

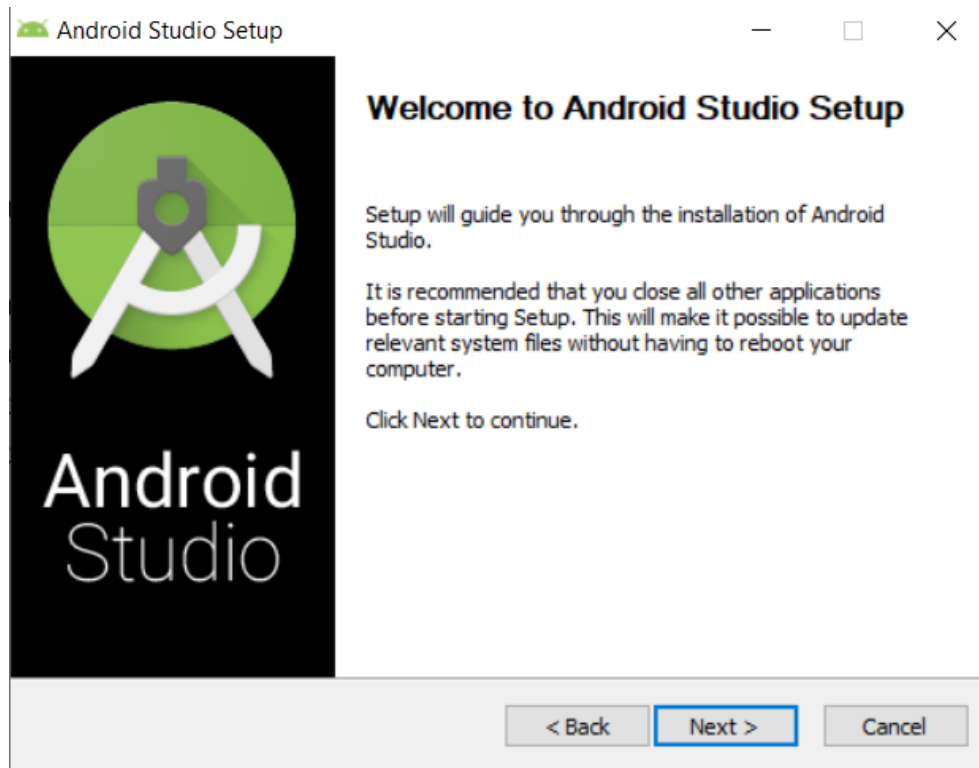
3. Steps to Install Android Studio:

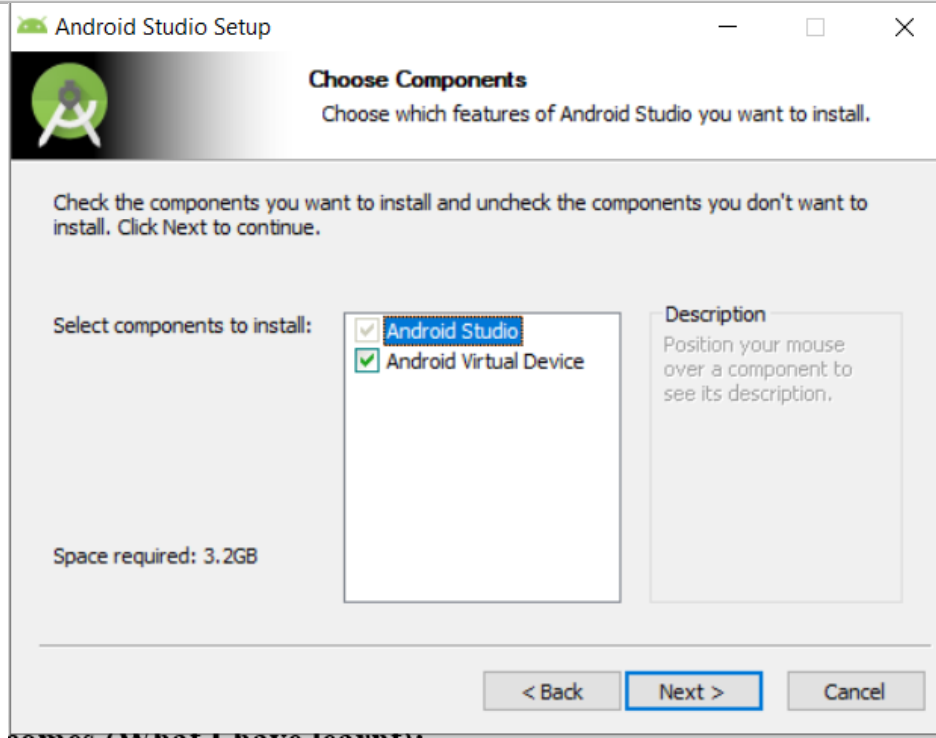
i) System Requirements:

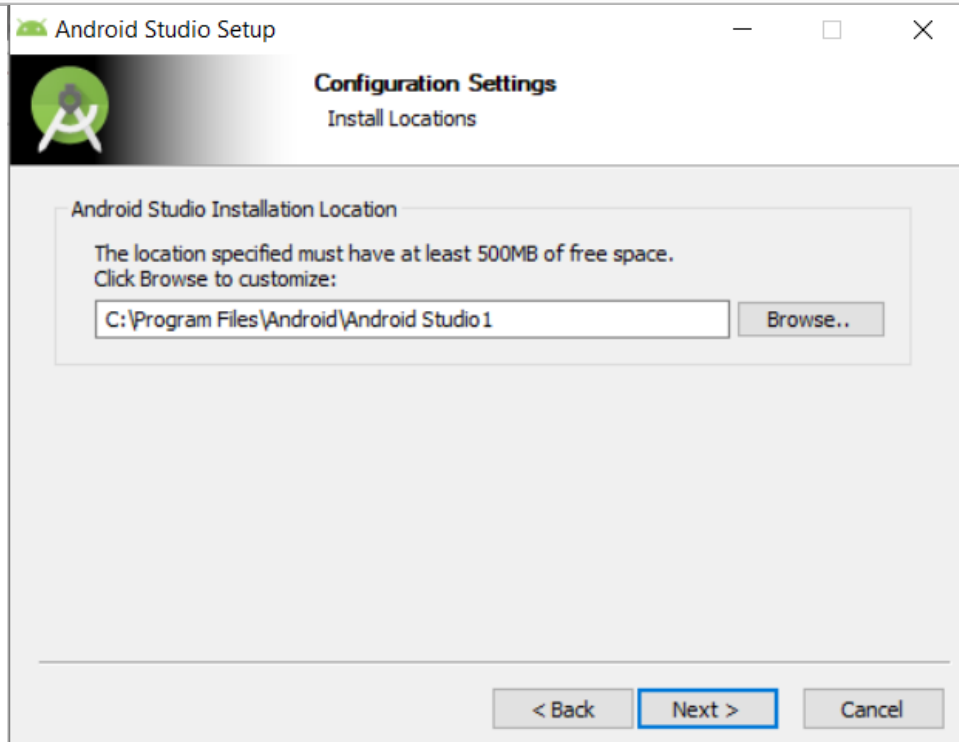
The open source software needed to create Android applications is available online for download. The list of software that you will require before you begin developing Android applications is provided below.

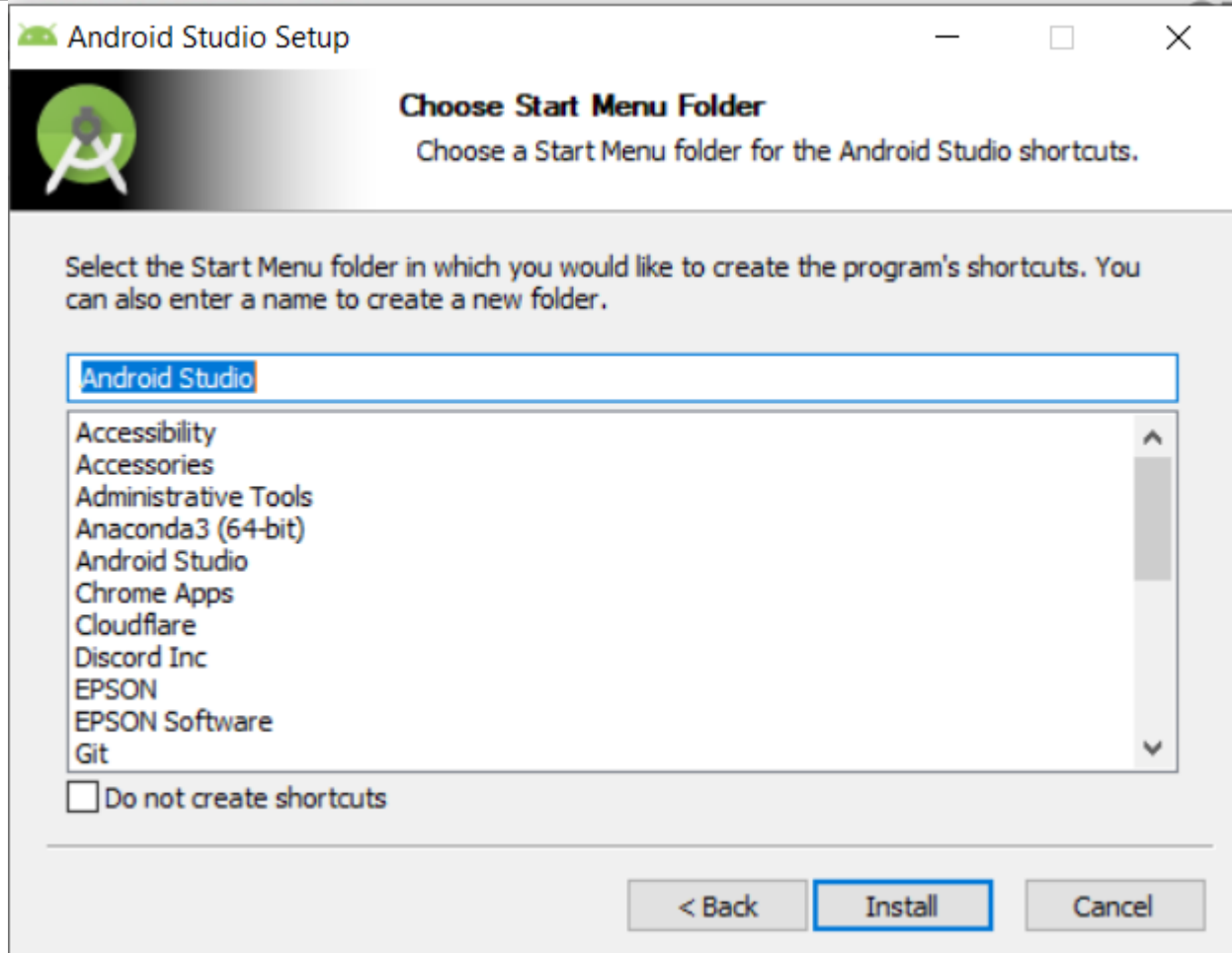
- Java JDK5 or later version.
- Java Runtime Environment (JRE) 6 Android Studio

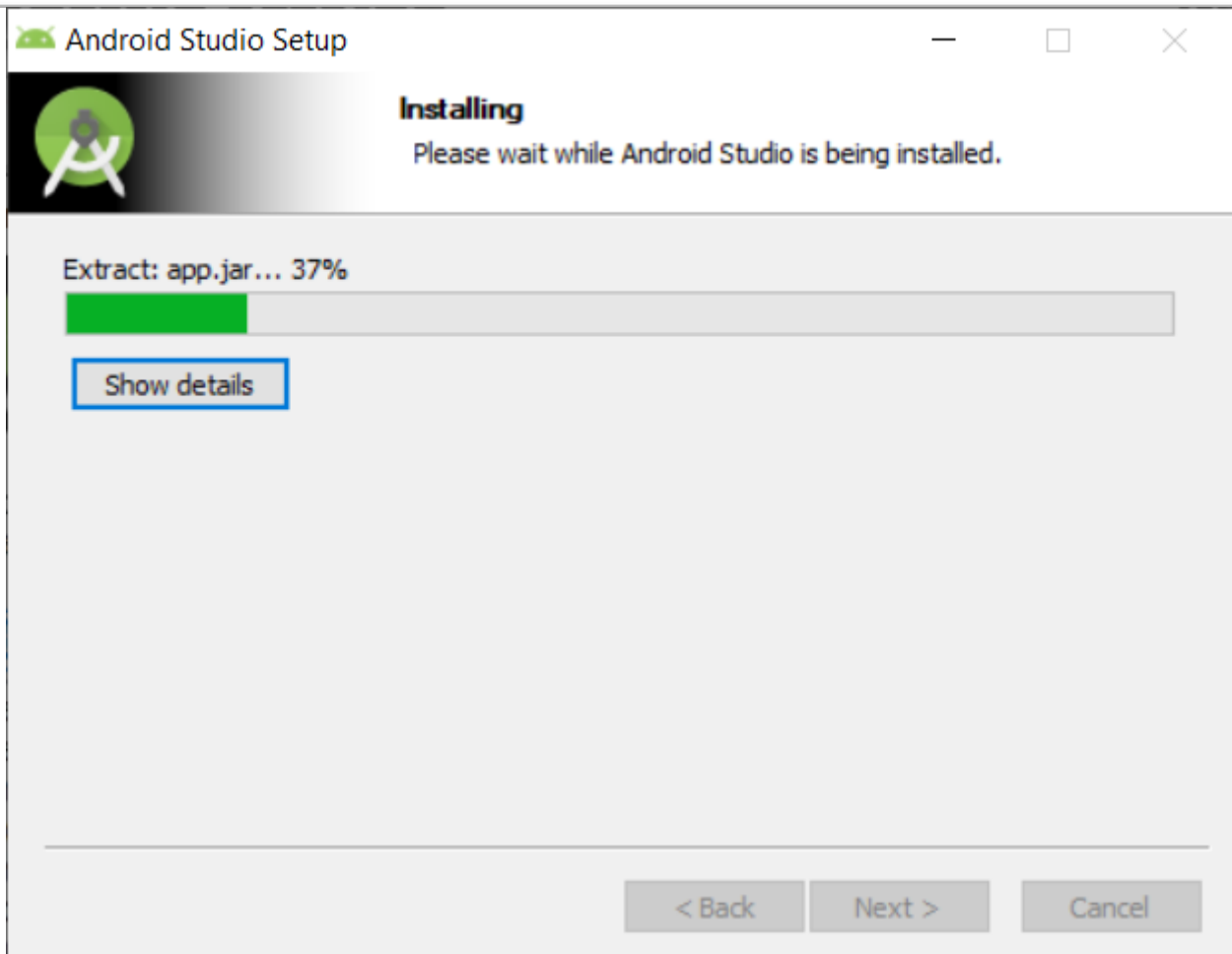
ii) Setup Android Studio:

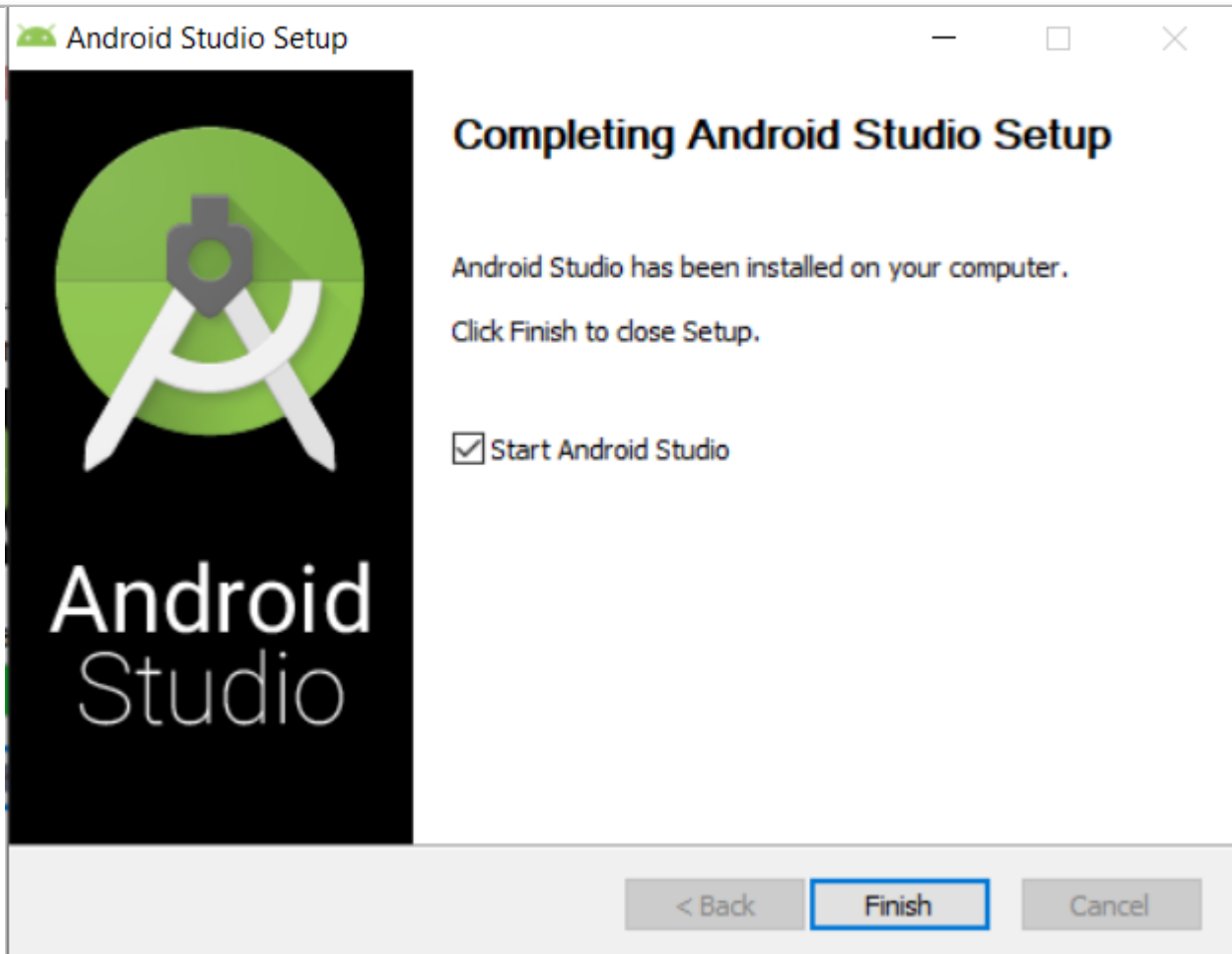














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```
1 package com.example.myapplication;
2
3 import ...
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21 public class MainActivity extends AppCompatActivity {
22
23     private AppBarConfiguration appBarConfiguration;
24
25     private ActivityMainBinding binding;
26
27     @Override
28     protected void onCreate(Bundle savedInstanceState) {
29         super.onCreate(savedInstanceState);
30
31         binding = ActivityMainBinding.inflate(getLayoutInflater());
32         setContentView(binding.getRoot());
33
34         setSupportActionBar(binding.toolbar);
35
36         NavController navController = Navigation.findNavController( activity: this, R.id.nav_host_fragment_content_main);
37         appBarConfiguration = new AppBarConfiguration.Builder(navController.getGraph()).build();
38         NavigationUI.setupActionBarWithNavController( activity: this, navController, appBarConfiguration);
39
40         binding.fab.setOnClickListener(new View.OnClickListener() {
41
42             @Override
43             public void onClick(View view) {
44                 Snackbar.make(view, text: "Replace with your own action", Snackbar.LENGTH_LONG)
45                     .setAction( text: "Action", listener: null).show();
46             }
47         });
48     }
49 }
```



Learning outcomes (What I have learnt):

Evaluation Grid :

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.	Student Performance (Conduct of experiment) objectives/Outcomes.		12
2.	Viva Voce		10
3.	Submission of Work Sheet (Record)		8
	Total		30