

q-1 Add a gradle dependency.

```
dependencies
{
    compile 'com.google.code.gson:gson:2.8.0'
}
```

q-2 Using java plugin, make changes in the manifest to make the jar executable. Using java -jar JAR_NAME, the output should be printed as "Hello World"

```
public class hello {
    public static void main(String[] args) {
        System.out.println("Hello World");
    }
}
```

```
plugins {
    id 'java'
}
group 'org.example'
version '1.0-SNAPSHOT'
sourceCompatibility = 1.8
jar {
    manifest {
        attributes('Main-Class': 'hello')
    }
}
repositories {
    mavenCentral()
}
dependencies {
    testCompile group: 'junit', name: 'junit', version: '4.12'
}
```

```
siddharth@siddharth:~/Downloads/build/libs$ java -jar prac-1.0-SNAPSHOT.jar
Hello World
siddharth@siddharth:~/Downloads/build/libs$
```

q-3 Differentiate between the different dependency scopes: compile, runtime, testCompile, testRuntime using different dependencies being defined in your build.gradle.

Dependency configuration is nothing but defines a set of dependencies. You can use this feature to declare external dependencies, which you want to download from the web. This defines the following different standard configurations.

- Compile – The dependencies required to compile the production source of the project.
- Runtime – The dependencies required by the production classes at runtime. By default, also includes the compile time dependencies.
- Test Compile – The dependencies required to compile the test source of the project. By default, it includes compiled production classes and the compile time dependencies.
- Test Runtime – The dependencies required to run the tests. By default, it includes runtime and test compile dependencies.

Dependency configuration is nothing but defines a set of dependencies. You can use this feature to declare external dependencies, which you want to download from the web. This defines the following different standard configurations.

- Compile – The dependencies required to compile the production source of the project.

- Runtime – The dependencies required by the production classes at runtime. By default, also includes the compile time dependencies.
- Test Compile – The dependencies required to compile the test source of the project. By default, it includes compiled production classes and the compile time dependencies.
- Test Runtime – The dependencies required to run the tests. By default, it includes runtime and test compile dependencies.

Dependency configuration is nothing but defines a set of dependencies. You can use this feature to declare external dependencies, which you want to download from the web. This defines the following different standard configurations.

- Compile – The dependencies required to compile the production source of the project.
- Runtime – The dependencies required by the production classes at runtime. By default, also includes the compile time dependencies.
- Test Compile – The dependencies required to compile the test source of the project. By default, it includes compiled production classes and the compile time dependencies.
- Test Runtime – The dependencies required to run the tests. By default, it includes runtime and test compile dependencies.

q-4 Create a custom plugin which contains a custom task which prints the current date-time. Using that plugin in your project, execute that task after the jar task executes.

```
buildscript {
    dependencies {
        classpath files {
            'show-date/build/libs/show-date-groovy-1.0-SNAPSHOT.jar'
        }
    }
}
group 'info.garagesalesapp'
version '1.0-SNAPSHOT'
apply plugin: 'java'
sourceCompatibility = 1.8
repositories {
    mavenCentral()
}
dependencies {
    testCompile group: 'junit', name: 'junit', version: '4.12'
    compile project(':json-display')
}
apply plugin: 'project-report'
apply plugin: 'show-date-plugin'
```

```
siddharth@siddharth:~/Downloads/original/Ex_Files_Gradle_Java_Dev/Exercise_Files/05_05/Begin/java-project$ gradle showDate
:showDate

Current date: Mon Mar 02 10:21:23 IST 2020

BUILD SUCCESSFUL
```

q-5 Instead of using default source set, use src/main/javaCode1, src/main/javaCode2 to be taken as code source. Make sure that the JAR created contains files from both the directories and not from src/main/java.

```
public class add {
    public static void main(String[] args) {
```

```

        int a=10;
        int b=20;
        int c=a+b;
        System.out.println(c);
    }
}

```

```

public class sub {
    public static void main(String[] args) {
        int a=40;
        int b=90;
        int c=b-a;
        System.out.println(c);
    }
}

```

```

plugins {
    id 'java'
}
group 'org.example'
version '1.0-SNAPSHOT'
sourceCompatibility = 1.8
jar{
    manifest{
        attributes('Main-Class':'hello')
    }
}
repositories {
    mavenCentral()
}
dependencies {
    testCompile group: 'junit', name: 'junit', version: '4.12'
}
sourceSets{
    main{
        java{
            srcDir 'src/main/javacode1'
            srcDir 'src/main/javacode2'
        }
        resources {
            srcDir 'src/resources'
        }
    }
}
}

```

```

siddharth@siddharth:~/Downloads/build/libs$ jar -xvf prac-1.0-SNAPSHOT.jar
  created: META-INF/
  inflated: META-INF/MANIFEST.MF
  inflated: hello.class
  inflated: sub.class
  inflated: add.class
siddharth@siddharth:~/Downloads/build/libs$ 

```

q-6 Override the Gradle Wrapper task to install a different version of gradle. Make sure that the task written in Q4 also executes with it.

Same as Q4- Only we have to change the version of gradle in wrapper properties.

q-7 Run the gradle profile command and attach the resulting files

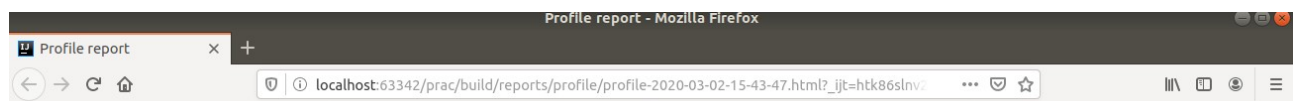
```
siddharth@siddharth:~/Downloads$ gradle --profile
```

```
> Task :help
```

```
Welcome to Gradle 6.1.
```

```
To run a build, run gradle <task> ...
```

```
To see a list of available tasks, run gradle tasks
```



Profile report

Profiled build: help

Started on: 2020/03/02 - 15:43:47

Summary

Configuration

Dependency Resolution

Artifact Transforms

Task Execution

Description	Duration
Total Build Time	0.453s
Startup	0.420s
Settings and buildSrc	0.003s
Loading Projects	0.001s
Configuring Projects	0.013s
Artifact Transforms	0s
Task Execution	0.002s

Generated by [Gradle 6.1](#) at 2 Mar, 2020 3:43:47 PM