

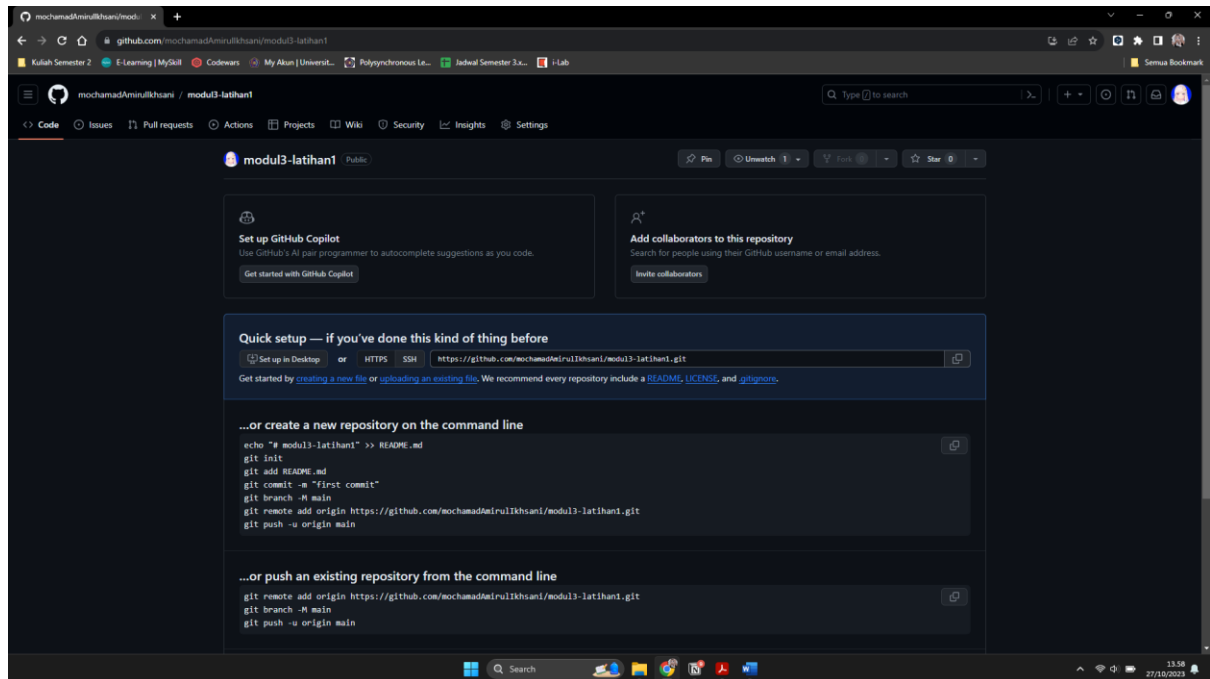
Mochamad Amirul Ikhsani

202210370311227

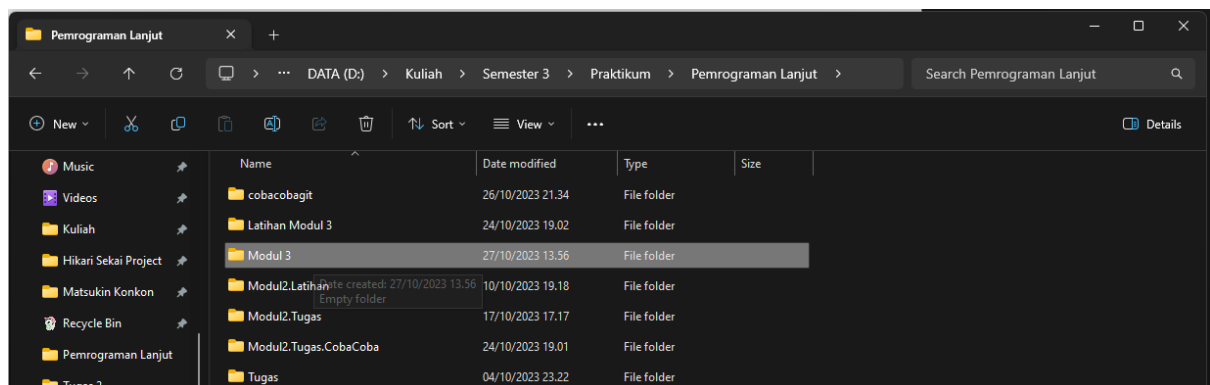
Laporan Modul 3

Link Github : <https://github.com/mochamadAmirulIkhsani/modul3-latihan1>

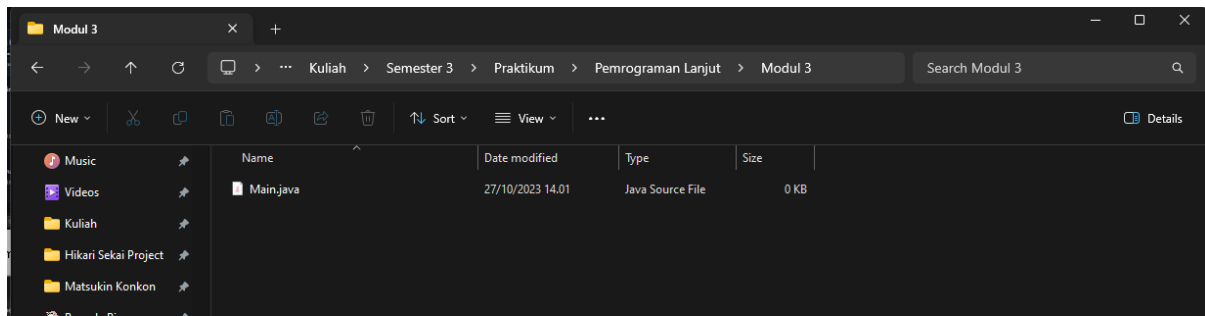
Latihan 1 : **Menggunakan Git untuk Pengendalian Versi**



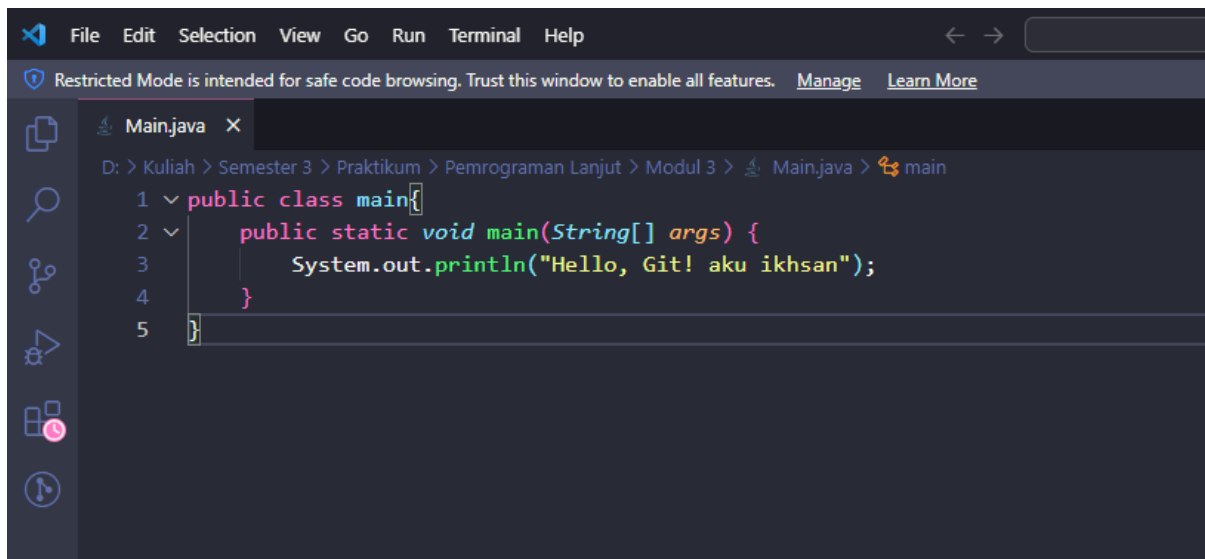
Gambar 1. Membuat repositori public di Github



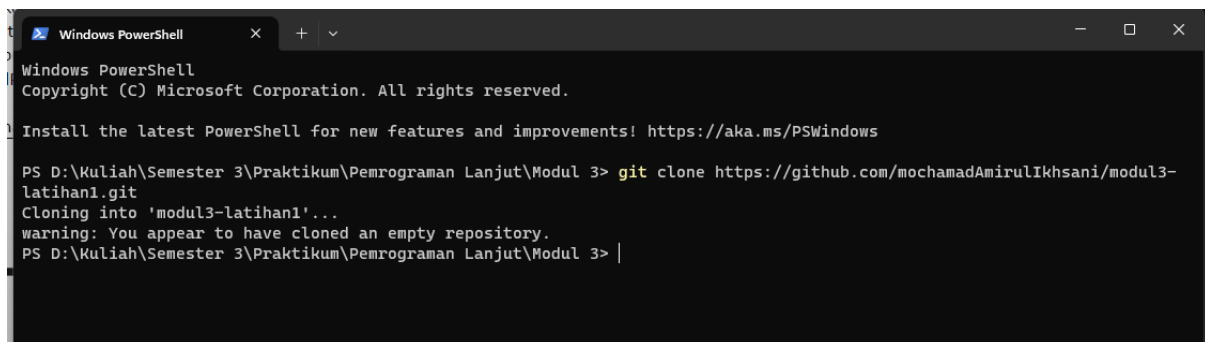
Gambar 2. Membuat folder kosong untuk ditaruh



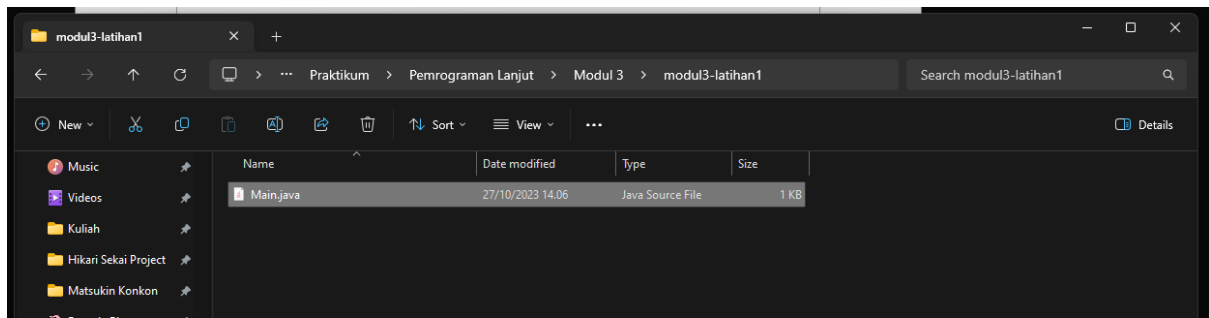
Gambar 3. Menambahkan file java main



Gambar 4. Menambahkan syntax sederhana di file java yang telah dibuat



Gambar 5. Membuka terminal terhadap file direktori kemudian melakukan clone repositori ke komputer saya



Gambar 6. Memindahkan file java ke file clone githubnya

```
Cloning into 'modul3-latihan1'...
warning: You appear to have cloned an empty repository.
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3> ls

Directory: D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3

Mode                LastWriteTime         Length Name
----                -
d-----          27/10/2023      14.12             modul3-latihan1

PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3> cd modul3-latihan1
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> |
```

Gambar 7. Memasuki direktori clone dengan menggunakan command cd modul3-latihan1

```
Directory: D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1

Mode                LastWriteTime         Length Name
----                -
-a-----          27/10/2023      14.06             129 Main.java

PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> git add Main.java
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> |
```

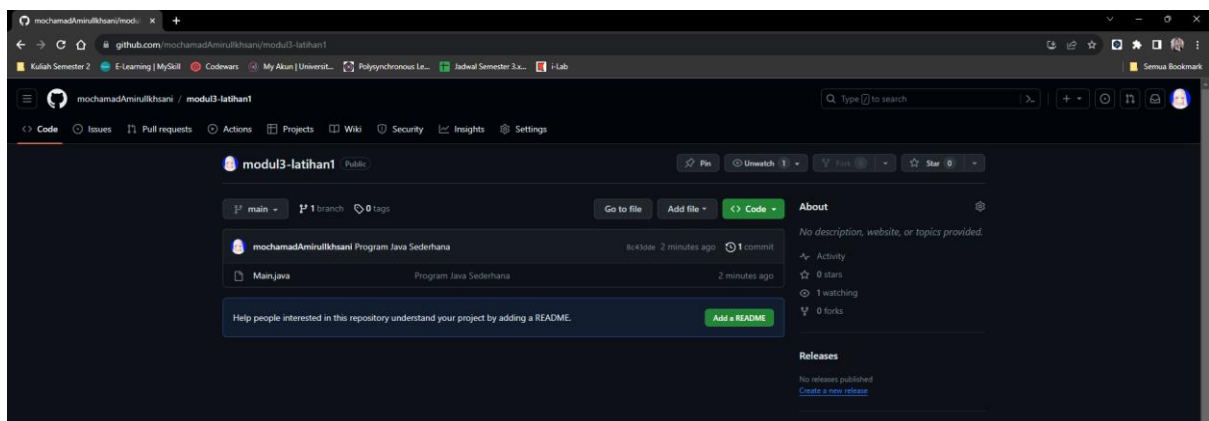
Gambar 8. Menambahkan perubahan ke index Git dengan cara git add Main.java, menambahkan Main.java untuk ke dalam Git

```
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> git add Main.java
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> git commit -m "Program Java Sederhana"
[main (root-commit) 8c43dde] Program Java Sederhana
1 file changed, 5 insertions(+)
create mode 100644 Main.java
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> |
```

Gambar 9. Membuat commit dengan pesan “Program Java Sederhana”

```
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 337 bytes | 337.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/mochamadAmirulIkhsani/modul3-latihan1.git
* [new branch] main -> main
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\modul3-latihan1> |
```

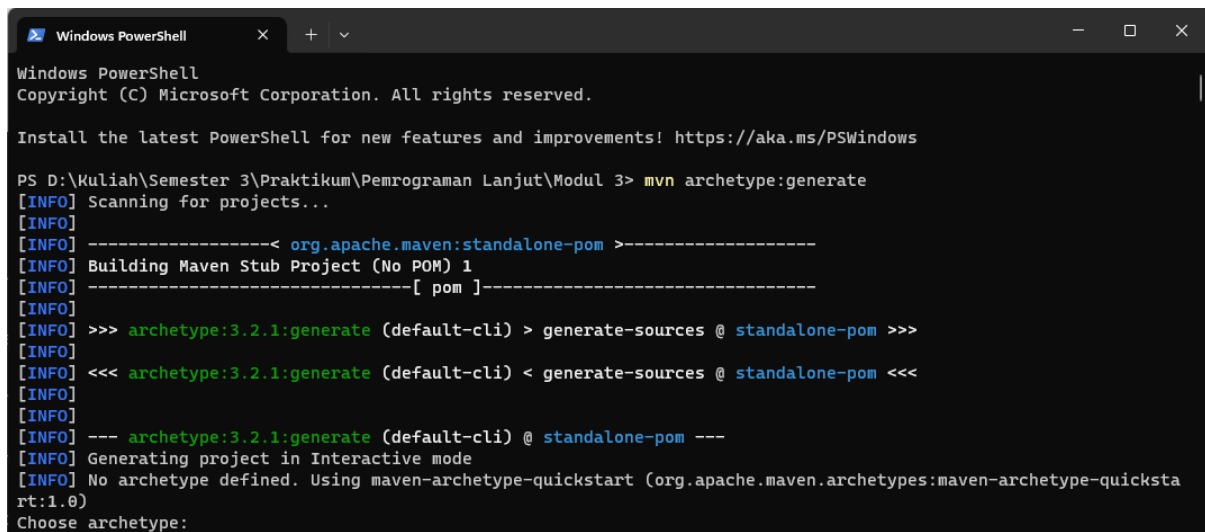
Gambar 10. Melakukan mendorong perubahan ke repositori jarak jauh



Gambar 11. Bukti bahwa repositori pada Website GitHub berhasil

Link repositori : <https://github.com/mochamadAmirulIkhsani/modul3-latihan1>

Latihan 2 : Membuat dan Mengelola Dependensi dengan Maven

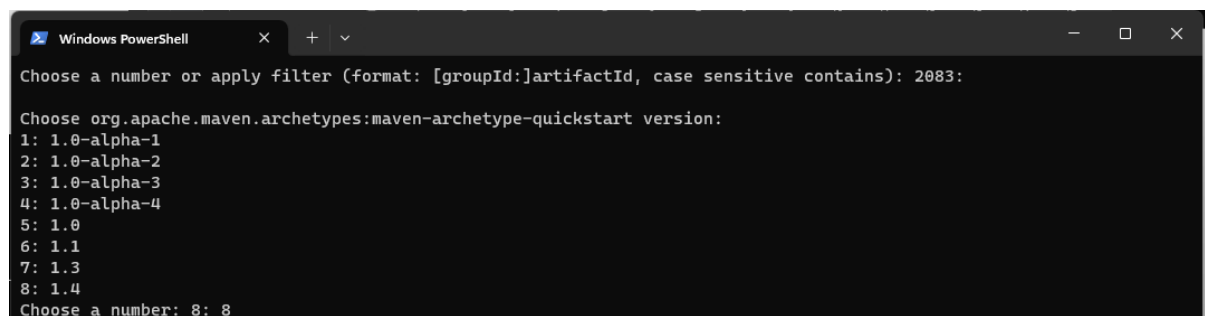


```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3> mvn archetype:generate
[INFO] Scanning for projects...
[INFO] -----< org.apache.maven:standalone-pom >-----
[INFO] Building Maven Stub Project (No POM) 1
[INFO] -----[ pom ]-----
[INFO]
[INFO] >>> archetype:3.2.1:generate (default-cli) > generate-sources @ standalone-pom >>>
[INFO]
[INFO] <<< archetype:3.2.1:generate (default-cli) < generate-sources @ standalone-pom <<<
[INFO]
[INFO] --- archetype:3.2.1:generate (default-cli) @ standalone-pom ---
[INFO] Generating project in Interactive mode
[INFO] No archetype defined. Using maven-archetype-quickstart (org.apache.maven.archetypes:maven-archetype-quickstart:1.0)
Choose archetype:
```

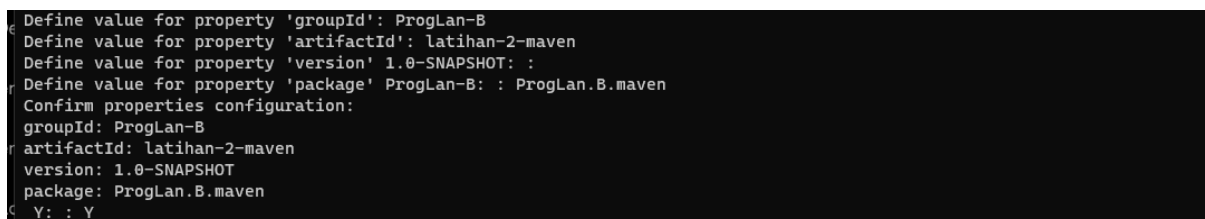
Gambar 12. Mengubah direktori ke tempat yang ingin digunakan untuk menyimpan proyek kemudian membuat proyek Maven Baru dengan command archetype:generate



```
Choose a number or apply filter (format: [groupId:]artifactId, case sensitive contains): 2083:

Choose org.apache.maven.archetypes:maven-archetype-quickstart version:
1: 1.0-alpha-1
2: 1.0-alpha-2
3: 1.0-alpha-3
4: 1.0-alpha-4
5: 1.0
6: 1.1
7: 1.3
8: 1.4
Choose a number: 8: 8
```

Gambar 13. Memilih type maven, kemudian memilih archetypenya dan versinya



```
Define value for property 'groupId': ProgLan-B
Define value for property 'artifactId': latihan-2-maven
Define value for property 'version' 1.0-SNAPSHOT: :
Define value for property 'package' ProgLan-B: : ProgLan.B.maven
Confirm properties configuration:
groupId: ProgLan-B
artifactId: latihan-2-maven
version: 1.0-SNAPSHOT
package: ProgLan.B.maven
Y: : Y
```

Gambar 14. Memberikan beberapa konfigurasi lanjutan seperti Apa nama groupnya trus nama filenya, kemudia versinya dan yang terakhir nama packagenya dan jika sudah pas input Y

```

[INFO] -----
[INFO] Using following parameters for creating project from Archetype: maven-archetype-quickstart:1.4
[INFO] -----
[INFO] Parameter: groupId, Value: ProgLan-B
[INFO] Parameter: artifactId, Value: latihan-2-maven
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] Parameter: package, Value: ProgLan.B.maven
[INFO] Parameter: packageInPathFormat, Value: ProgLan/B/maven
[INFO] Parameter: package, Value: ProgLan.B.maven
[INFO] Parameter: groupId, Value: ProgLan-B
[INFO] Parameter: artifactId, Value: latihan-2-maven
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] Project created from Archetype in dir: D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\latihan-2-maven
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 12:44 min
[INFO] Finished at: 2023-10-27T21:02:07+07:00
[INFO] -----

```

Gambar 15. Bukti jika sudah sukses membuat mavennya

```

PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3> cd latihan-2-maven
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\latihan-2-maven> mvn compile

```

Gambar 16. Masuk ke dalam direktori proyek

```

21  <dependencies>
22  <dependency>
23      <groupId>org.apache.commons</groupId>
24      <artifactId>commons-lang3</artifactId>
25      <version>3.12.0</version>
26  </dependency>
27  </dependencies>
28

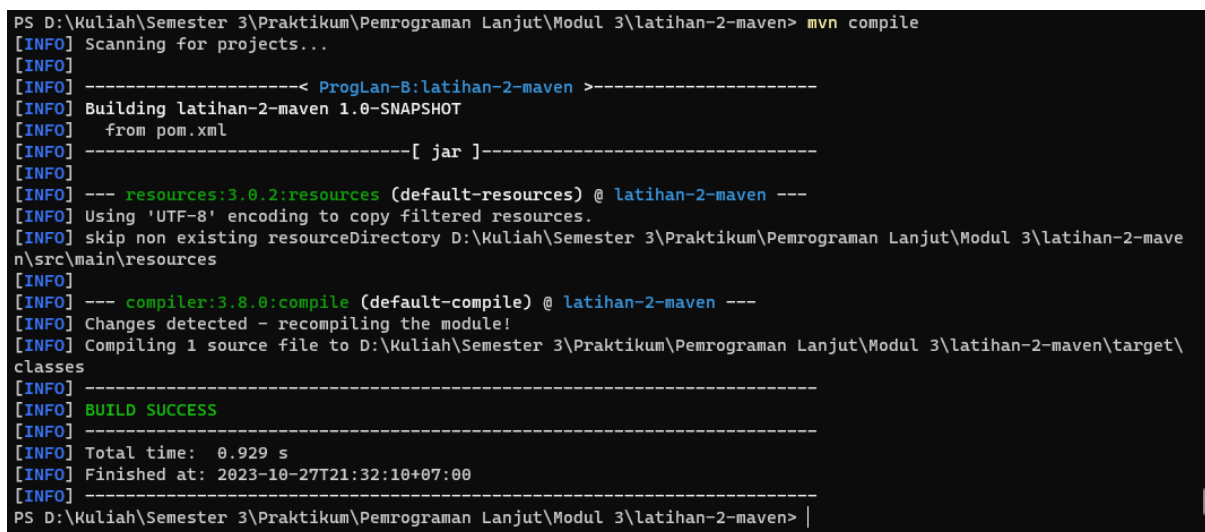
```

Gambar 17. Menambahkan dependensi Apache Commons Lang



```
1 package ProgLan.B.maven;
2 import org.apache.commons.lang3.StringUtils;
3 public class App
4 {
5     public static void main( String[] args )
6     {
7         String text = "Hello, Maven anjay!";
8         String reversedText = StringUtils.reverse(text);
9         System.out.println(reversedText);
10    }
11 }
12
13
```

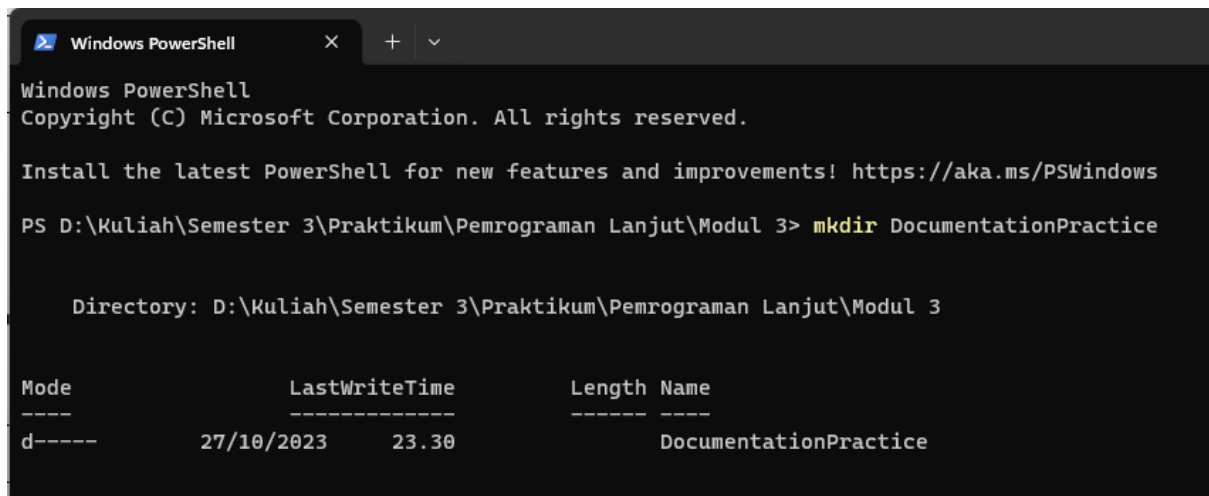
Gambar 18. Membuat program sederhana yang dari file dependensi



```
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\latihan-2-maven> mvn compile
[INFO] Scanning for projects...
[INFO]
[INFO] -----< ProgLan-B:latihan-2-maven >-----
[INFO] Building latihan-2-maven 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.0.2:resources (default-resources) @ latihan-2-maven ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\latihan-2-maven\src\main\resources
[INFO]
[INFO] --- compiler:3.8.0:compile (default-compile) @ latihan-2-maven ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\latihan-2-maven\target\classes
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 0.929 s
[INFO] Finished at: 2023-10-27T21:32:10+07:00
[INFO]
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\latihan-2-maven>
```

Gambar 19. Kompilasi dan jalankan program

Latihan 3 : Menyusun Dokumentasi dalam File README



```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3> mkdir DocumentationPractice

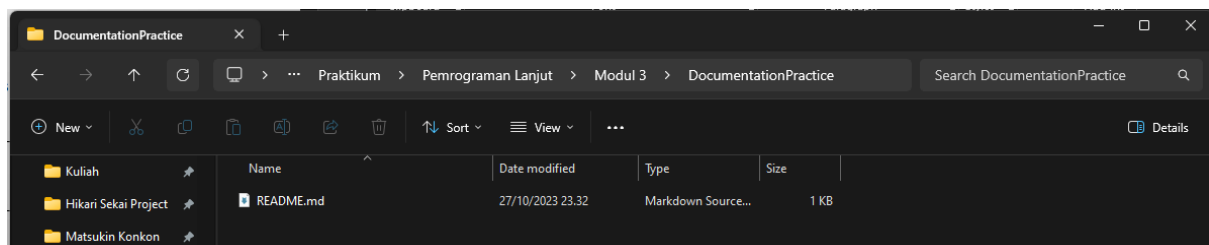
Directory: D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3

Mode                LastWriteTime         Length Name
----                -
d-----         27/10/2023   23.30             DocumentationPractice
```

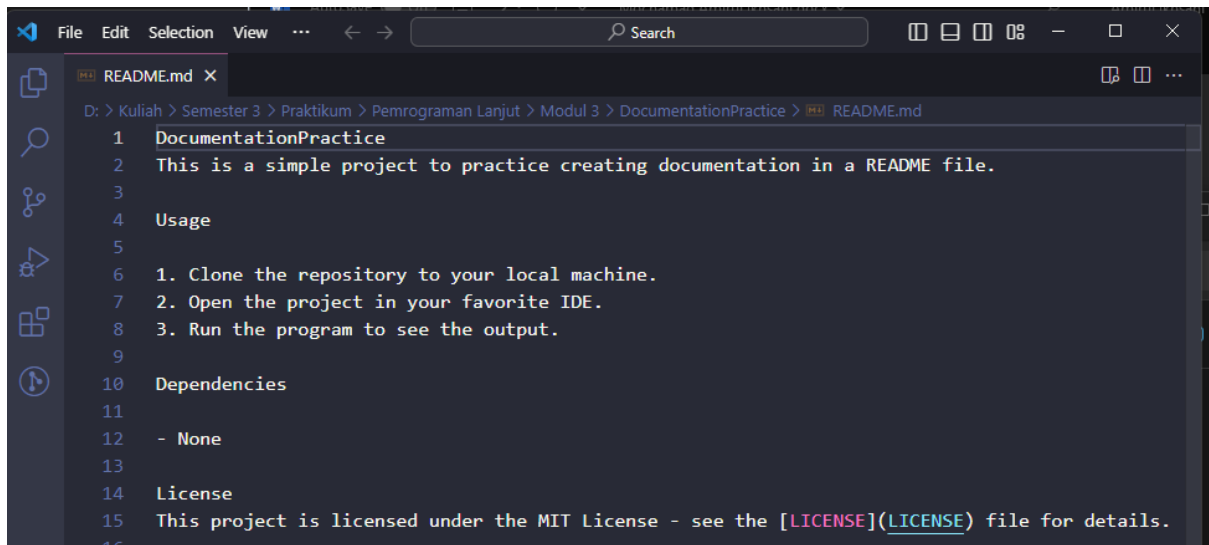
Gambar 20. Membuat direktori baru untuk proyek

```
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3> cd .\DocumentationPractice\
PS D:\Kuliah\Semester 3\Praktikum\Pemrograman Lanjut\Modul 3\DocumentationPractice> |
```

Gambar 21. Masuk ke direktori proyek



Gambar 22. Membuat file README.md



The image shows a code editor window with a dark theme. The title bar at the top includes a menu bar with 'File', 'Edit', 'Selection', and 'View', followed by a search bar and window control buttons. The editor is displaying a file named 'README.md'. The content of the file is as follows:

```
1 DocumentationPractice
2 This is a simple project to practice creating documentation in a README file.
3
4 Usage
5
6 1. Clone the repository to your local machine.
7 2. Open the project in your favorite IDE.
8 3. Run the program to see the output.
9
10 Dependencies
11
12 - None
13
14 License
15 This project is licensed under the MIT License - see the [LICENSE](LICENSE) file for details.
```

Gambar 23. Menulis konten isi file README kemudian simpan/save dan tutup file nya.