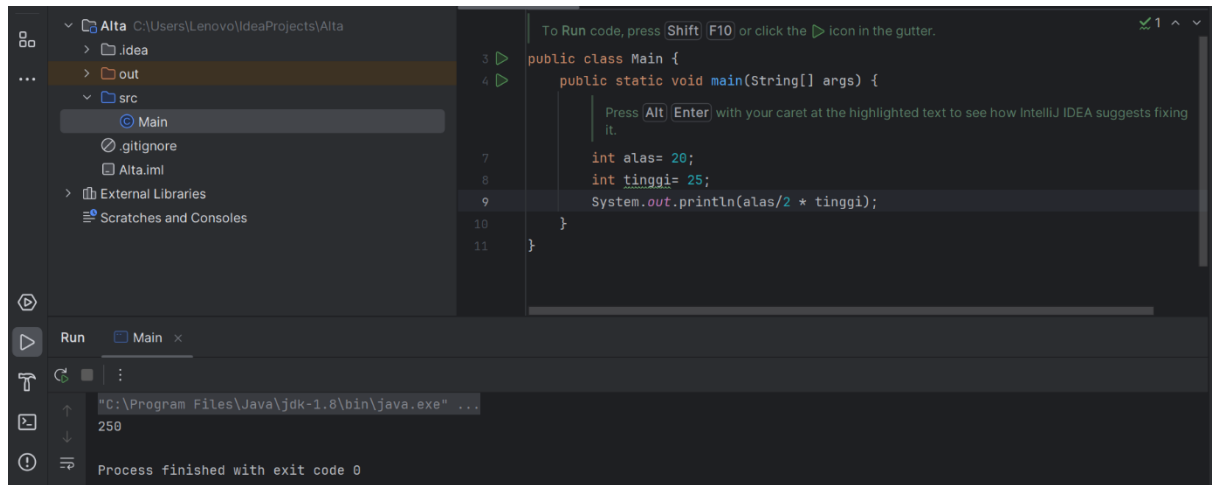


Basic Programming

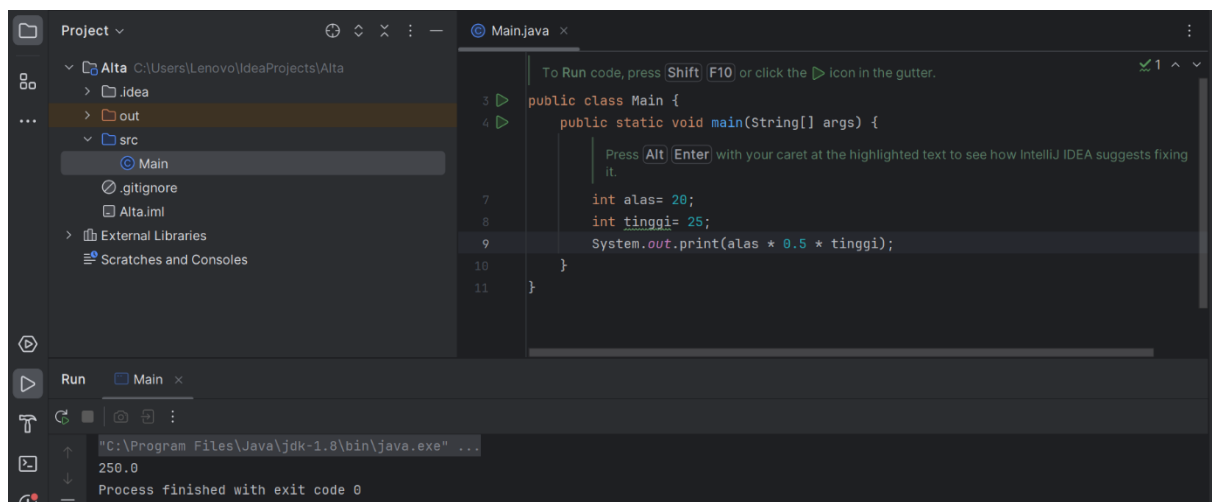
1. Problem 1



The screenshot shows the IntelliJ IDEA IDE with a project named 'Alta'. The file explorer on the left shows the project structure: 'Alta' (C:\Users\Lenovo\IdeaProjects\Alta) contains '.idea', 'out', and 'src'. The 'src' folder contains 'Main', '.gitignore', and 'Alta.iml'. The 'Main' class is selected. The code editor shows the following Java code:

```
3 public class Main {  
4     public static void main(String[] args) {  
5         // To Run code, press Shift F10 or click the Run icon in the gutter.  
6           
7         int alas= 20;  
8         int tinggi= 25;  
9         System.out.println(alas/2 * tinggi);  
10    }  
11 }
```

The Run tool window at the bottom shows the execution of the 'Main' class. The command used is 'C:\Program Files\Java\jdk-1.8\bin\java.exe ...'. The output is '250'. The process finished with exit code 0.



The screenshot shows the IntelliJ IDEA IDE with the same project 'Alta'. The file explorer on the left shows the project structure: 'Alta' (C:\Users\Lenovo\IdeaProjects\Alta) contains '.idea', 'out', and 'src'. The 'src' folder contains 'Main', '.gitignore', and 'Alta.iml'. The 'Main' class is selected. The code editor shows the following Java code:

```
3 public class Main {  
4     public static void main(String[] args) {  
5         // To Run code, press Shift F10 or click the Run icon in the gutter.  
6           
7         int alas= 20;  
8         int tinggi= 25;  
9         System.out.print(alas * 0.5 * tinggi);  
10    }  
11 }
```

The Run tool window at the bottom shows the execution of the 'Main' class. The command used is 'C:\Program Files\Java\jdk-1.8\bin\java.exe ...'. The output is '250.0'. The process finished with exit code 0.

2. Problem 2

The image shows a screenshot of the IntelliJ IDEA IDE. The top pane displays the source code for `Main.java`. The code prompts the user to enter a student's score and then checks it against several ranges to determine the grade. The bottom pane shows the project structure and the output of the program.

```
// to see how IntelliJ IDEA suggests fixing it.
Scanner scanner = new Scanner(System.in);
System.out.println("Masukkan Nilai Mahasiswa");

int nilai = Integer.parseInt(scanner.nextLine());
int bbA = 80;
int baA = 100;
int bbBps = 65;
int baBps = 79;
int bbB = 50;
int baB = 64;
int bbC = 35;
int baC = 49;
int bbD = 0;
int baD = 34;
if (nilai >= bbA && nilai <= baA) {
    System.out.println("Mendapat Nilai A");
} else if (nilai >= bbBps && nilai <= baBps) {
    System.out.println("Mendapat nilai B+");
} else if (nilai >= bbC && nilai <= baC) {
    System.out.println("Mendapat Nilai C");
} else if (nilai >= bbD && nilai <= baD) {
    System.out.println("Mendapat Nilai D");
} else {
    System.out.println("Invalid");
}
```

Project Structure:

- Tugas Alta
 - idea
 - out
 - src
 - Main
- .gitignore
- Tugas Alta.iml
- External Libraries
- Scratches and Consoles

Run Output:

```
Masukkan Nilai Mahasiswa
90
Mendapat Nilai A
Process finished with exit code 0
```

Project ▾

- ▼ Tugas Alta C:\Users\Lenovo\IdeaProjects\Tugas Alta
 - ▼ idea
 - ▼ out
 - ▼ src
 - Main
 - .gitignore
 - Tugas Alta.iml
 - ▼ External Libraries
 - Scratches and Consoles

Run Main ▾

Process finished with exit code 0

```
13      int bbA = 80;
14      int baA = 100;
15      int bbBps = 65;
16      int baBps = 79;
17      int bbB = 50;
18      int baB = 64;
19      int bbC = 35;
20      int baC = 49;
21      int bbD = 0;
22      int baD = 34;
23      if (nilai >= bbA && nilai <= baA) {
24          System.out.println("Mendapat Nilai A");
25      } else if (nilai >= bbBps && nilai <= baBps) {
26          System.out.println("Mendapat nilai B+");
27      } else if (nilai >= bbC && nilai <= baC) {
28          System.out.println("Mendapat Nilai B");
29      } else if (nilai >= bbB && nilai <= baB) {
30          System.out.println("Mendapat Nilai C");
31      } else if (nilai >= bbD && nilai <= baD) {
32          System.out.println("Mendapat Nilai D");
33      } else {
34          System.out.println("Invalid");
35      }
```

Project ▾

- ▼ Tugas Alta C:\Users\Lenovo\IdeaProjects\Tugas Alta
 - ▼ idea
 - ▼ out
 - ▼ src
 - Main
 - .gitignore
 - Tugas Alta.iml
 - ▼ External Libraries
 - Scratches and Consoles

Run Main ▾

Process finished with exit code 0

```
20      int baC = 49;
21      int bbD = 0;
22      int baD = 34;
23      if (nilai >= bbA && nilai <= baA) {
24          System.out.println("Mendapat Nilai A");
25      } else if (nilai >= bbBps && nilai <= baBps) {
26          System.out.println("Mendapat nilai B+");
27      } else if (nilai >= bbB && nilai <= baB) {
28          System.out.println("Mendapat Nilai B");
29      } else if (nilai >= bbC && nilai <= baC) {
30          System.out.println("Mendapat Nilai C");
31      } else if (nilai >= bbD && nilai <= baD) {
32          System.out.println("Mendapat Nilai D");
33      } else {
34          System.out.println("Invalid");
35      }
```

Project ▾

- ▼ Tugas Alta C:\Users\Lenovo\IdeaProjects\Tugas Alta
 - ▼ idea
 - ▼ out
 - ▼ src
 - Main
 - .gitignore
 - Tugas Alta.iml
 - ▼ External Libraries
 - Scratches and Consoles

Run Main ▾

Process finished with exit code 0

```
20      int baC = 49;
21      int bbD = 0;
22      int baD = 34;
23      if (nilai >= bbA && nilai <= baA) {
24          System.out.println("Mendapat Nilai A");
25      } else if (nilai >= bbBps && nilai <= baBps) {
26          System.out.println("Mendapat nilai B+");
27      } else if (nilai >= bbB && nilai <= baB) {
28          System.out.println("Mendapat Nilai B");
29      } else if (nilai >= bbC && nilai <= baC) {
30          System.out.println("Mendapat Nilai C");
31      } else if (nilai >= bbD && nilai <= baD) {
32          System.out.println("Mendapat Nilai D");
33      } else {
34          System.out.println("Invalid");
35      }
```

Project ▾ C:\Users\Lenovo\IdeaProjects\Tugas Alta

- ▾ .idea
- ▾ out
- ▾ src
 - Main
 - .gitignore
 - Tugas Alta.iml
- ▾ External Libraries
- ▾ Scratches and Consoles

Run Main ▾

C:\Program Files\Java\jdk-1.8.0_101\bin\java.exe ...

Masukkan Nilai Mahasiswa

25

Mendapat Nilai D

Process finished with exit code 0

```
20 int baC = 49;
21 int bbD = 0;
22 int baD = 34;
23 if (nilai >= baA && nilai <= baA) {
24     System.out.println("Mendapat Nilai A");
25 } else if (nilai >= bbBps && nilai <= baBps) {
26     System.out.println("Mendapat nilai B+");
27 } else if (nilai >= bbB && nilai <= baB) {
28     System.out.println("Mendapat Nilai B");
29 } else if (nilai >= bbC && nilai <= baC) {
30     System.out.println("Mendapat Nilai C");
31 } else if (nilai >= bbD && nilai <= baD) {
32     System.out.println("Mendapat Nilai D");
33 } else {
34     System.out.println("Invalid");
35 }
```

Project ▾ C:\Users\Lenovo\IdeaProjects\Tugas Alta

- ▾ .idea
- ▾ out
- ▾ src
 - Main
 - .gitignore
 - Tugas Alta.iml
- ▾ External Libraries
- ▾ Scratches and Consoles

Run Main ▾

C:\Program Files\Java\jdk-1.8.0_101\bin\java.exe ...

Masukkan Nilai Mahasiswa

101

Invalid

Process finished with exit code 0

```
20 int baC = 49;
21 int bbD = 0;
22 int baD = 34;
23 if (nilai >= baA && nilai <= baA) {
24     System.out.println("Mendapat Nilai A");
25 } else if (nilai >= bbBps && nilai <= baBps) {
26     System.out.println("Mendapat nilai B+");
27 } else if (nilai >= bbB && nilai <= baB) {
28     System.out.println("Mendapat Nilai B");
29 } else if (nilai >= bbC && nilai <= baC) {
30     System.out.println("Mendapat Nilai C");
31 } else if (nilai >= bbD && nilai <= baD) {
32     System.out.println("Mendapat Nilai D");
33 } else {
34     System.out.println("Invalid");
35 }
```

Project ▾ C:\Users\Lenovo\IdeaProjects\Tugas Alta

- ▾ .idea
- ▾ out
- ▾ src
 - Main
 - .gitignore
 - Tugas Alta.iml
- ▾ External Libraries
- ▾ Scratches and Consoles

Run Main ▾

C:\Program Files\Java\jdk-1.8.0_101\bin\java.exe ...

Masukkan Nilai Mahasiswa

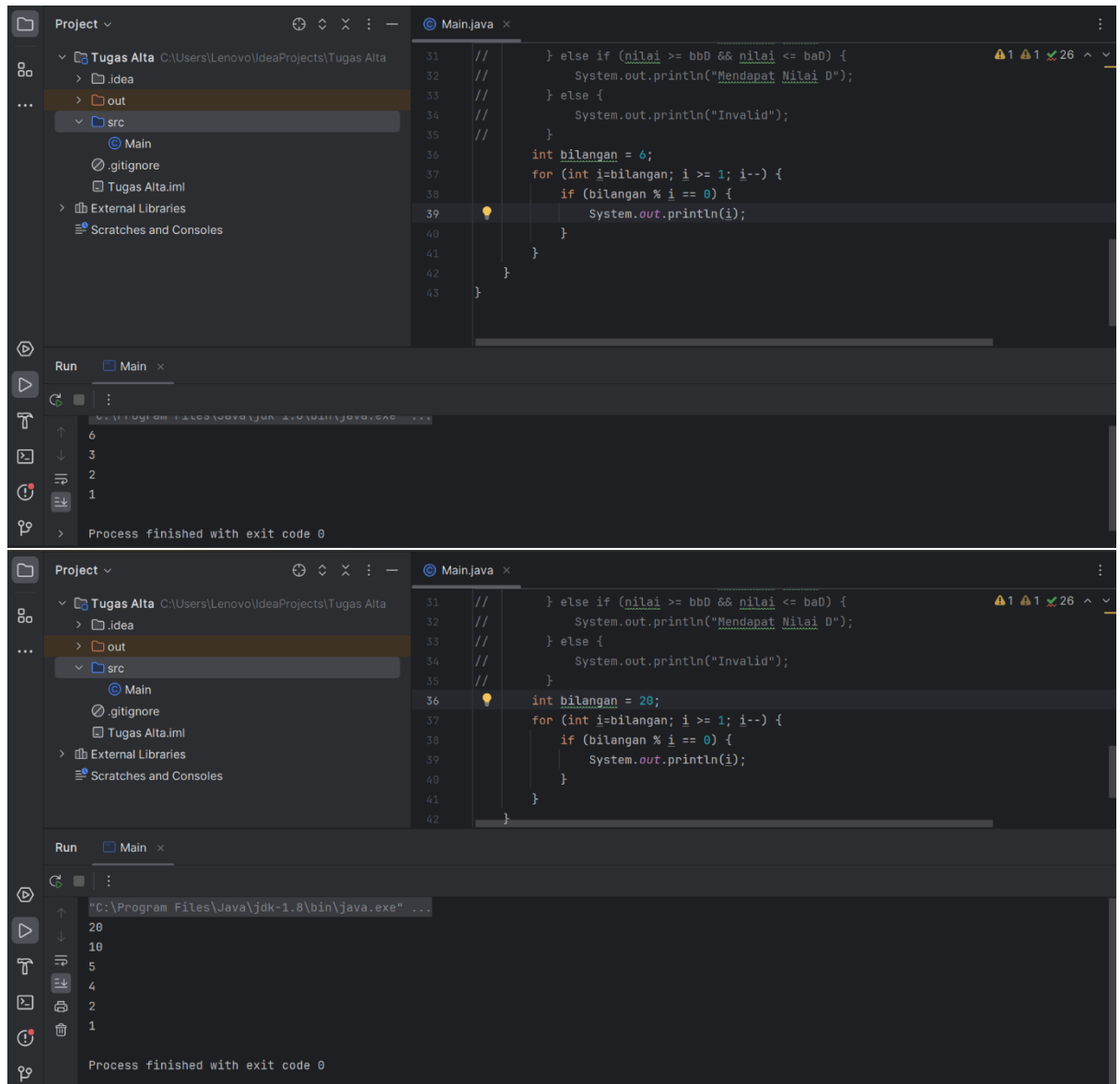
-1

Invalid

Process finished with exit code 0

```
20 int baC = 49;
21 int bbD = 0;
22 int baD = 34;
23 if (nilai >= baA && nilai <= baA) {
24     System.out.println("Mendapat Nilai A");
25 } else if (nilai >= bbBps && nilai <= baBps) {
26     System.out.println("Mendapat nilai B+");
27 } else if (nilai >= bbB && nilai <= baB) {
28     System.out.println("Mendapat Nilai B");
29 } else if (nilai >= bbC && nilai <= baC) {
30     System.out.println("Mendapat Nilai C");
31 } else if (nilai >= bbD && nilai <= baD) {
32     System.out.println("Mendapat Nilai D");
33 } else {
34     System.out.println("Invalid");
35 }
```

3. Problem 3



The image displays two screenshots of an IDE (IntelliJ IDEA) showing a Java program and its execution results.

Top Screenshot:

- Project Structure:** The project is named "Tugas Alta" and is located at "C:\Users\Lenovo\IdeaProjects\Tugas Alta". The source files are in the "src" directory, including "Main", ".gitignore", and "Tugas Alta.iml".
- Main.java Code:**

```
31 // } else if (nilai >= bbD && nilai <= baD) {
32 //     System.out.println("Mendapat Nilai D");
33 // } else {
34 //     System.out.println("Invalid");
35 // }
36 int bilangan = 6;
37 for (int i=bilangan; i >= 1; i--) {
38     if (bilangan % i == 0) {
39         System.out.println(i);
40     }
41 }
42 }
43 }
```
- Run Console:** The output shows the numbers 6, 3, 2, and 1, indicating the divisors of 6.
- Status:** Process finished with exit code 0.

Bottom Screenshot:

- Project Structure:** The project structure is the same as in the top screenshot.
- Main.java Code:**

```
31 // } else if (nilai >= bbD && nilai <= baD) {
32 //     System.out.println("Mendapat Nilai D");
33 // } else {
34 //     System.out.println("Invalid");
35 // }
36 int bilangan = 20;
37 for (int i=bilangan; i >= 1; i--) {
38     if (bilangan % i == 0) {
39         System.out.println(i);
40     }
41 }
42 }
```
- Run Console:** The output shows the numbers 20, 10, 5, 4, 2, and 1, indicating the divisors of 20.
- Status:** Process finished with exit code 0.