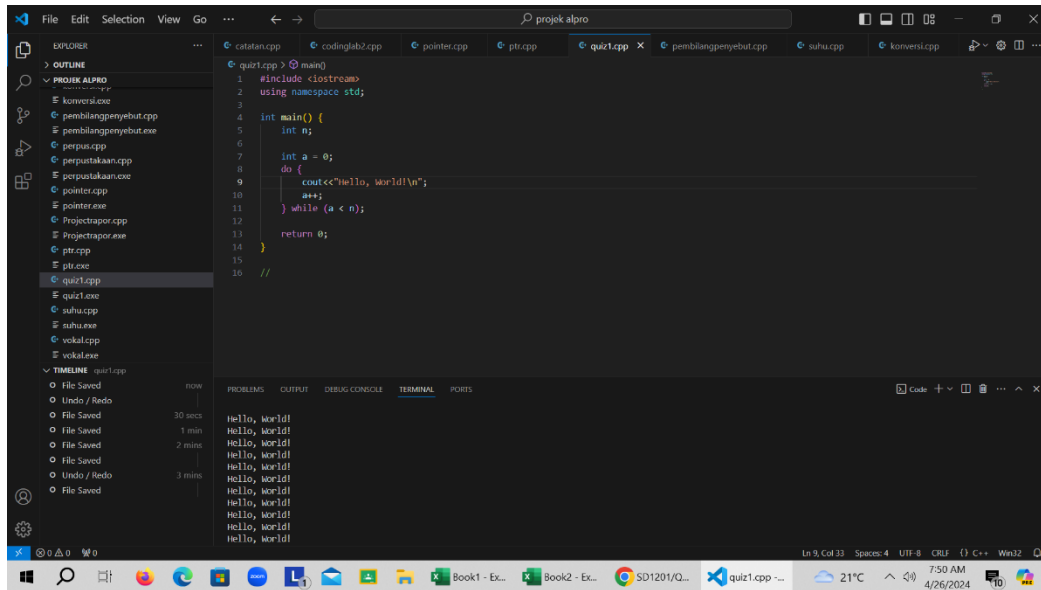


Prodi: Sains Data

1.
 - a. for loop

- b. while loop

c. do-while

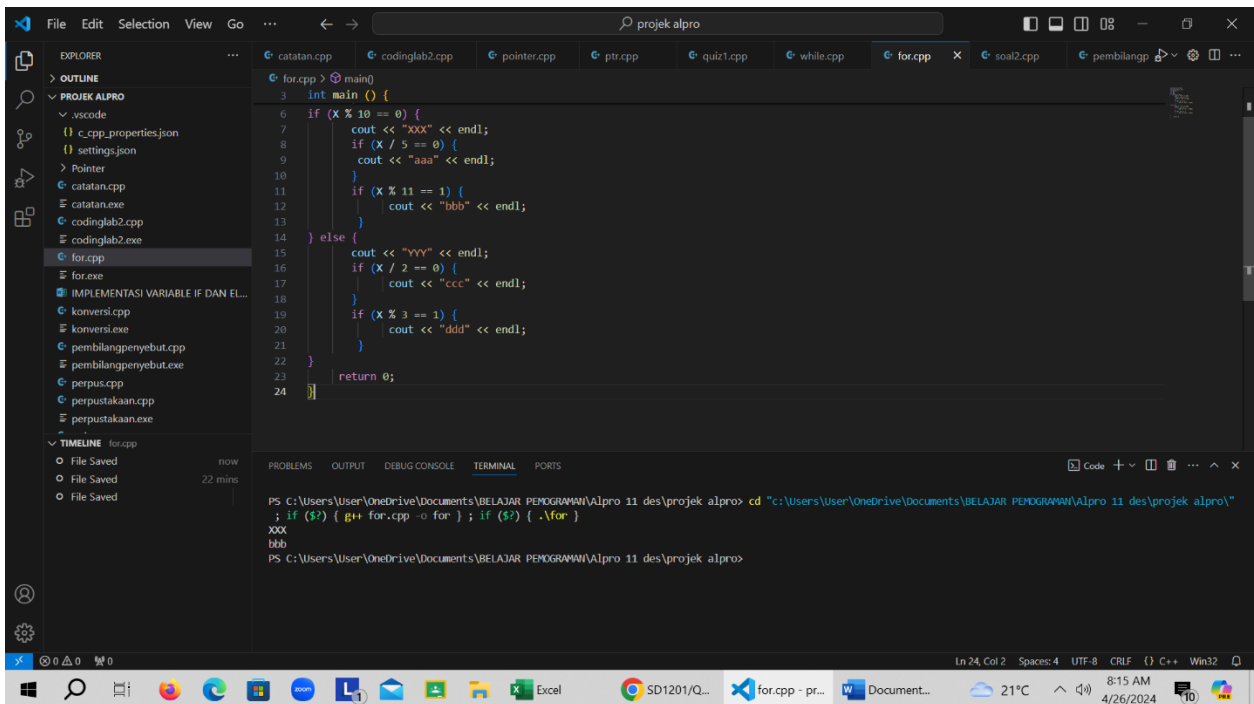


```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     int n;
6
7     int a = 0;
8     do {
9         cout << "Hello, world!\n";
10        a++;
11    } while (a < n);
12
13    return 0;
14 }
15
16 //
```

Terminal Output:

```
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
Hello, world!
```

2. a. output (XXX) dan (bbb)

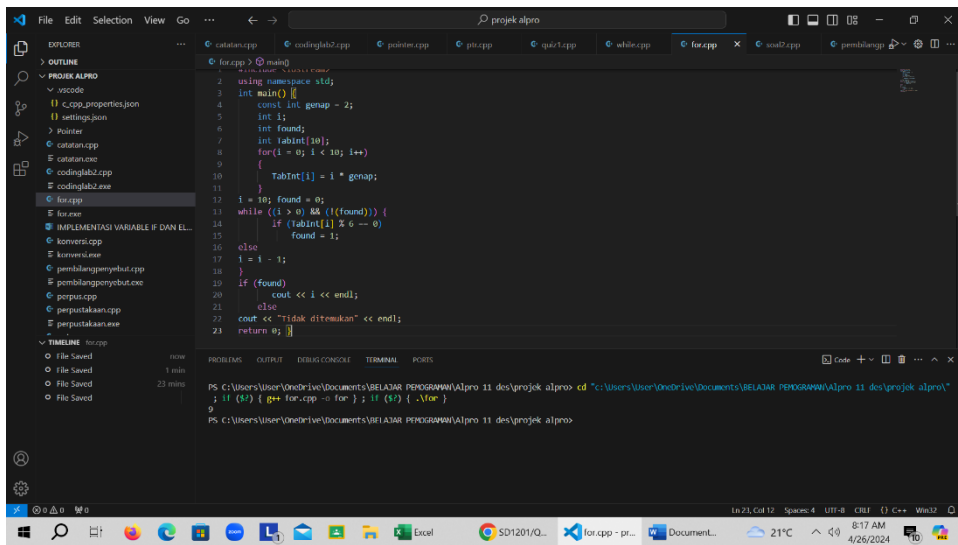


```
3 int main () {
4
5
6     if (X % 10 == 0) {
7         cout << "XXX" << endl;
8         if (X / 5 == 0) {
9             cout << "aaa" << endl;
10        }
11        if (X % 11 == 1) {
12            cout << "bbb" << endl;
13        }
14    } else {
15        cout << "YYY" << endl;
16        if (X / 2 == 0) {
17            cout << "ccc" << endl;
18        }
19        if (X % 3 == 1) {
20            cout << "ddd" << endl;
21        }
22    }
23
24    return 0;
25 }
```

Terminal Output:

```
PS C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro> cd "c:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro\"
; if ($?) { g++ for.cpp -o for } ; if ($?) { .\for }
XXX
bbb
PS C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro>
```

b. outputnya (9)



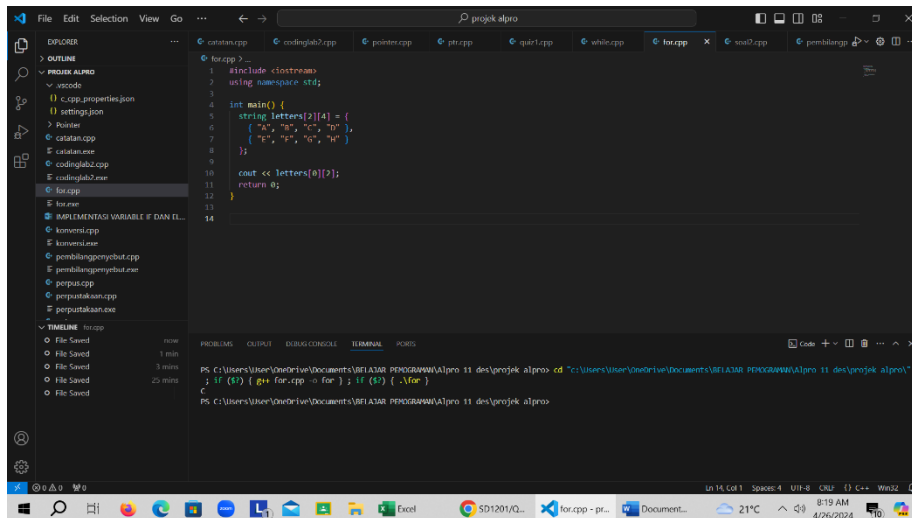
The screenshot shows the Visual Studio Code interface with a C++ file named `for.cpp` open. The code implements a Fibonacci sequence generator. It includes `using namespace std;`, defines a constant `int genap = 2;`, and declares an array `int TabFib[10];`. The `main` function uses a `for` loop to calculate the Fibonacci sequence and store it in the `TabFib` array. It then uses a `while` loop to print the sequence. The output of the program is displayed in the terminal window at the bottom.

```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     const int genap = 2;
6     int i;
7     int found;
8     int TabFib[10];
9     for(i = 0; i < 10; i++)
10     {
11         TabFib[i] = i * genap;
12     }
13     i = 10; found = 0;
14     while ((i > 0) && (i(found))) {
15         if (TabFib[i] % 6 == 0)
16             found = 1;
17         i = i - 1;
18     }
19     if (found)
20         cout << i << endl;
21     else
22         cout << "Tidak ditemukan" << endl;
23     return 0;
24 }
```

Terminal Output:

```
PS C:\Users\User\OneDrive\Documents\BELAJAR PENGENALAN Alpro 11 des\projek alpro> cd "C:\Users\User\OneDrive\Documents\BELAJAR PENGENALAN Alpro 11 des\projek alpro\"
; if ($?) { g++ for.cpp -o for.exe }
PS C:\Users\User\OneDrive\Documents\BELAJAR PENGENALAN Alpro 11 des\projek alpro>
```

c.outputnya(C)



The screenshot shows the Visual Studio Code interface with a C++ file named `for.cpp` open. The code includes `<iostream>` and `using namespace std;`. It defines a `main` function that declares a string array `string letters[2][4]` and initializes it with the characters 'A', 'B', 'C', 'D' in the first row and 'E', 'F', 'G', 'H' in the second row. The program then prints the first character of the first row and returns 0.

```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     string letters[2][4] = {
6         { 'A', 'B', 'C', 'D' },
7         { 'E', 'F', 'G', 'H' }
8     };
9     cout << letters[0][0];
10    return 0;
11 }
```

Terminal Output:

```
PS C:\Users\User\OneDrive\Documents\BELAJAR PENGENALAN Alpro 11 des\projek alpro> cd "C:\Users\User\OneDrive\Documents\BELAJAR PENGENALAN Alpro 11 des\projek alpro\"
; if ($?) { g++ for.cpp -o for.exe }
PS C:\Users\User\OneDrive\Documents\BELAJAR PENGENALAN Alpro 11 des\projek alpro>
```

3.

The screenshot shows the Visual Studio Code interface with a project named "projek alpro". The Explorer panel on the left shows a file tree for "PROJEK ALPRO" with files like `perpustakaan.exe`, `pointer.cpp`, `pointer.exe`, `Projectrapor.cpp`, `Projectrapor.exe`, `ptr.cpp`, `ptr.exe`, `quiz1.cpp`, `quiz1.exe`, `soal2.cpp`, `soal2.exe`, `suhu.cpp`, `suhu.exe`, `vokal.cpp`, `vokal.exe`, `while.cpp`, and `while.exe`. The Timeline panel shows "vokal.cpp" with "File Saved" events. The main editor shows the code for `vokal.cpp`:

```
3
4 bool IsVokal(char huruf) {
5     switch (huruf) {
6         case 'a':
7         case 'i':
8         case 'u':
9         case 'e':
10        case 'o':
11            return true;
12        default:
13            return false;
14    }
15 }
16 int main() {
17     char huruf;
18     cout << "Masukan huruf: ";
19     cin >> huruf;
20     if (IsVokal(huruf)) {
21         cout << "Huruf tersebut adalah vokal!" << endl;
22     } else {
23         cout << "Huruf tersebut bukan vokal!" << endl;
24     }
25 }
```

The TERMINAL panel shows the execution of the program:

```
PS C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro> cd "C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro\"
; if ($?) { g++ vokal.cpp -o vokal } ; if ($?) { .\vokal }
Masukan huruf: z
Huruf tersebut bukan vokal!
PS C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro> cd "C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro\"
; if ($?) { g++ vokal.cpp -o vokal } ; if ($?) { .\vokal }
Masukan huruf: a
Huruf tersebut adalah vokal!
PS C:\Users\User\OneDrive\Documents\BELAJAR PEMROGRAMAN\Alpro 11 des\projek alpro>
```

4.

The screenshot shows the Visual Studio Code interface with a project named "projek alpro". The Explorer panel on the left shows a file tree for "PROJEK ALPRO" with files like `ajik.cpp`, `ajik.exe`, `catatan.cpp`, `catatan.exe`, `codinglab2.cpp`, `codinglab2.exe`, `for.cpp`, `for.exe`, `IMPLEMENTASI VARIABLE IF DAN EL...`, `konversi.cpp`, `konversi.exe`, `larik.cpp`, `larik.exe`, `pembilangpenyebut.cpp`, `pembilangpenyebut.exe`, `perpus.cpp`, `perpustakaan.cpp`, and `perpustakaan.exe`. The Timeline panel shows "larik.cpp" with multiple "File Saved" events. The main editor shows the code for `larik.cpp`:

```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     string cars [4] = {"Volvo", "BMW", "Ford", "Mazda"};
6
7     // mengambil data pada array
8     cout << "Mobil ini bernama : " << cars[4] << endl;
9
10    return 0;
11    //Output tidak akan keluar karena array hanya sampai dengan 3(0,1,2,3)
12    //sedangkan otuput meminta 4
13 }
```

```
b. string food = "Pizza";\
```

```
*string_ptr = &pizza;
```