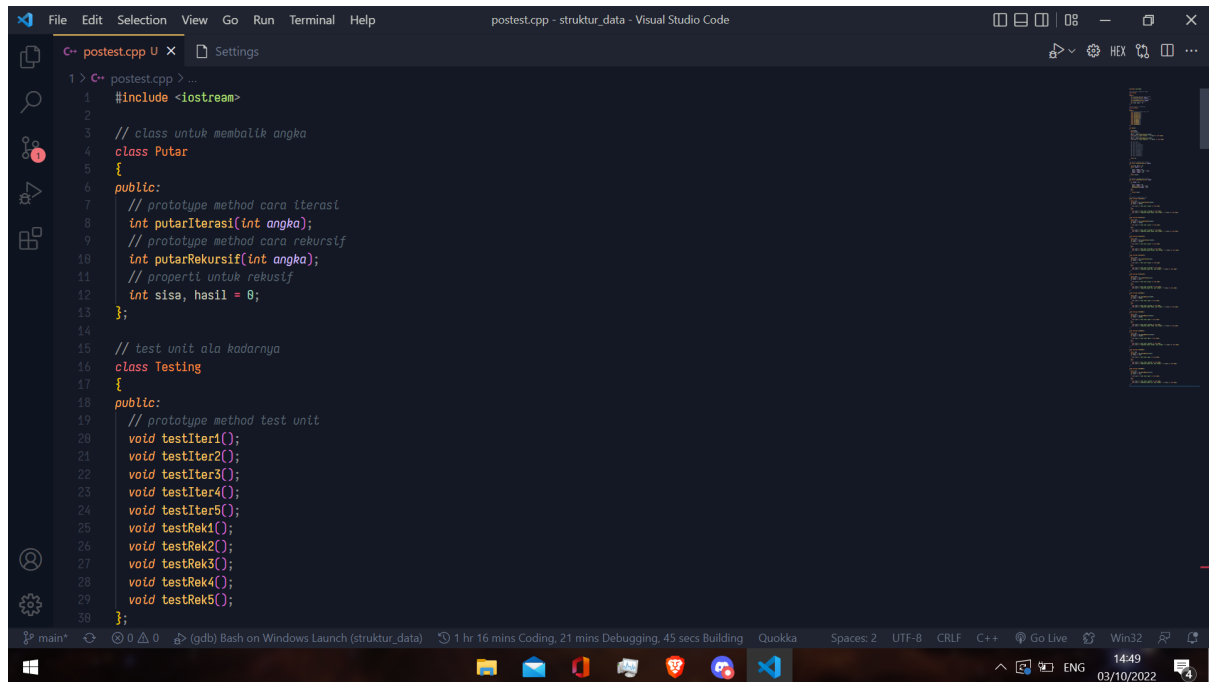
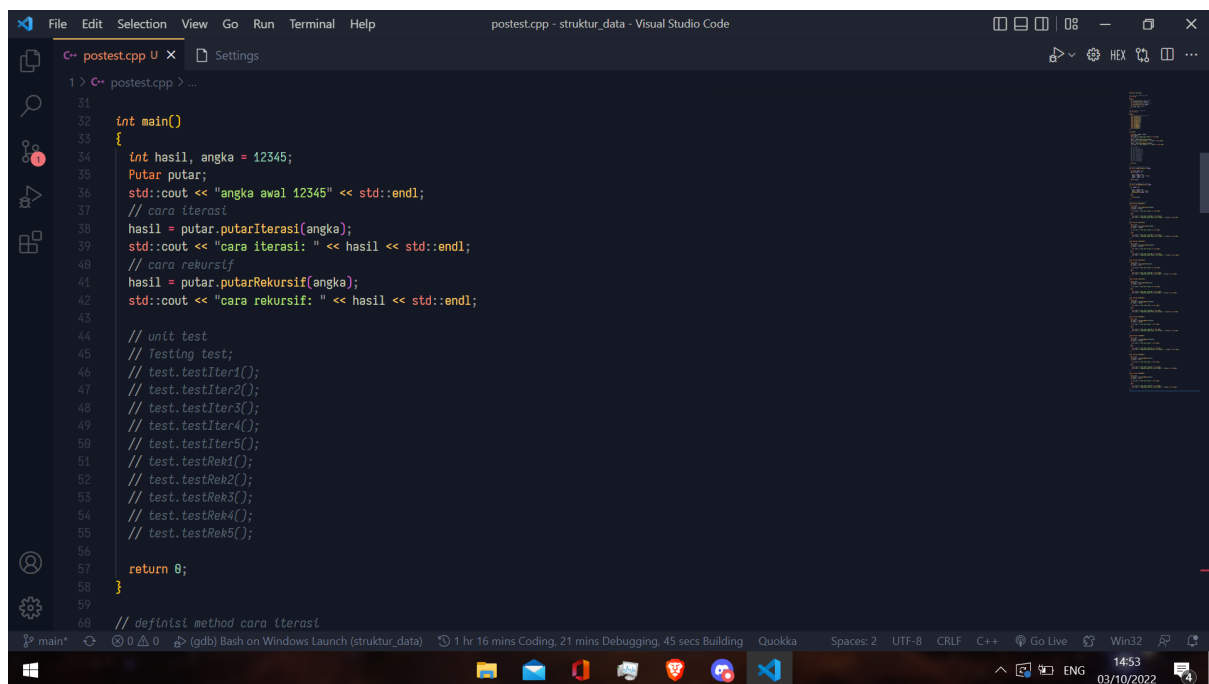


[2100018363][muhammad hanif ramadhani][posttest 1]



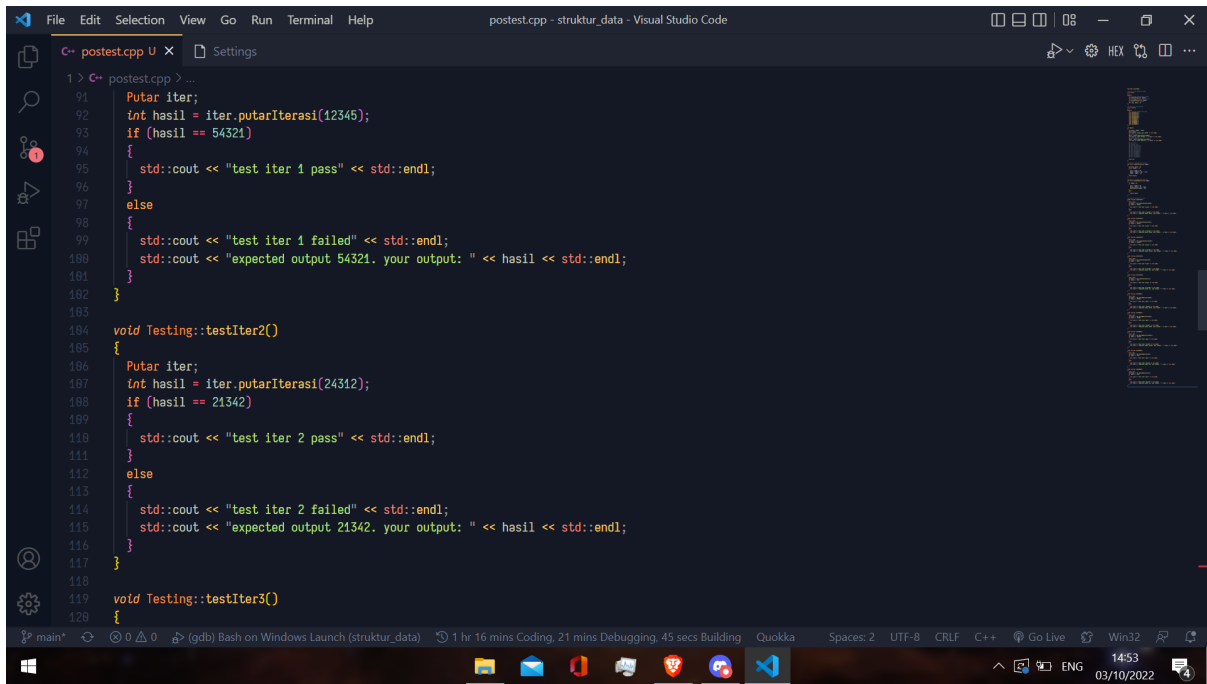
```
1 > C++ posttest.cpp > ...
1 #include <iostream>
2
3 // class untuk membalik angka
4 class Putar
5 {
6 public:
7     // prototype method cara iterasi
8     int putarIterasi(int angka);
9     // prototype method cara rekursif
10    int putarRekursif(int angka);
11    // properti untuk rekursif
12    int sisa, hasil = 0;
13 };
14
15 // test unit ala kadarnya
16 class Testing
17 {
18 public:
19     // prototype method test unit
20     void testIter1();
21     void testIter2();
22     void testIter3();
23     void testIter4();
24     void testIter5();
25     void testRek1();
26     void testRek2();
27     void testRek3();
28     void testRek4();
29     void testRek5();
30 };
```



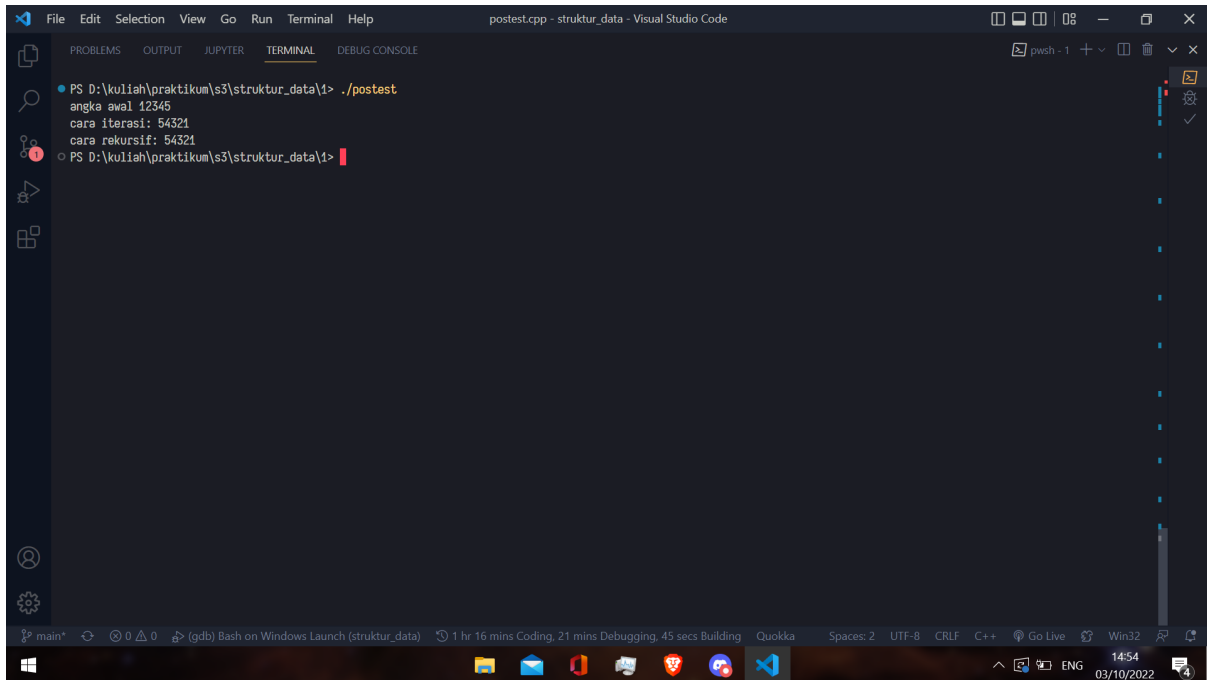
```
31
32 int main()
33 {
34     int hasil, angka = 12345;
35     Putar putar;
36     std::cout << "angka awal 12345" << std::endl;
37     // cara iterasi
38     hasil = putar.putarIterasi(angka);
39     std::cout << "cara iterasi: " << hasil << std::endl;
40     // cara rekursif
41     hasil = putar.putarRekursif(angka);
42     std::cout << "cara rekursif: " << hasil << std::endl;
43
44     // unit test
45     // Testing test;
46     // test.testIter1();
47     // test.testIter2();
48     // test.testIter3();
49     // test.testIter4();
50     // test.testIter5();
51     // test.testRek1();
52     // test.testRek2();
53     // test.testRek3();
54     // test.testRek4();
55     // test.testRek5();
56
57     return 0;
58 }
59
60 // definisi method cara iterasi
```

```
1 > C++ posttest.cpp > ...
61 int Putar::putarIterasi(int angka)
62 {
63     int sisa, hasil = 0;
64     while (angka != 0)
65     {
66         sisa = angka % 10;
67         hasil = (hasil * 10) + sisa;
68         angka = angka / 10;
69     }
70     return hasil;
71 }
72
73 // definisi method cara rekursif
74 int Putar::putarRekursif(int angka)
75 {
76     if (angka > 0)
77     {
78         sisa = angka % 10;
79         hasil = hasil * 10 + sisa;
80         putarRekursif(angka / 10);
81     }
82     else
83     {
84         return hasil;
85     }
86 }
87
88 // definisi method test unit
89 void Testing::testIter1()
90 {
```

main* 0 0 (gdb) Bash on Windows Launch (struktur_data) 1 hr 16 mins Coding, 21 mins Debugging, 45 secs Building Quokka Spaces: 2 UTF-8 CRLF C++ Go Live Win32 14:53 03/10/2022



```
1 > C++ posttest.cpp > ...
91     Putar iter;
92     int hasil = iter.putarIterasi(12345);
93     if (hasil == 54321)
94     {
95         std::cout << "test iter 1 pass" << std::endl;
96     }
97     else
98     {
99         std::cout << "test iter 1 failed" << std::endl;
100        std::cout << "expected output 54321. your output: " << hasil << std::endl;
101    }
102 }
103
104 void Testing::testIter2()
105 {
106     Putar iter;
107     int hasil = iter.putarIterasi(24312);
108     if (hasil == 21342)
109     {
110         std::cout << "test iter 2 pass" << std::endl;
111     }
112     else
113     {
114         std::cout << "test iter 2 failed" << std::endl;
115         std::cout << "expected output 21342. your output: " << hasil << std::endl;
116     }
117 }
118
119 void Testing::testIter3()
120 {
```



```
PROBLEMS OUTPUT JUPYTER TERMINAL DEBUG CONSOLE
• PS D:\kuliah\praktikum\s3\struktur_data\1> ./posttest
angka awal 12345
cara iterasi: 54321
cara rekursif: 54321
○ PS D:\kuliah\praktikum\s3\struktur_data\1>
```