

Mission 1

The screenshot shows a C development environment with a code editor and a terminal. The code editor displays a C program with the following content:

```
1 int maardftgein(){
2     /*no main*/
3     int d;
4     int h;
5     int u;
6
7     int foo(){
8         int k1;
9         int k2;
10        if(k1 == k2){
11            return k1;
12        }
13    }
14
15    return d;
16
17 }
18
19 int srgf(){
20 }
21
22 void adrgf(){
23 }
24
25 }
```

The terminal window shows the output of the compilation process:

```
*****
Test number 1 shuld pass
simpleTest
*****
ERROR: main not declared

dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$
```

The status bar at the bottom indicates the current position is Line 25, Column 1.

The screenshot shows the same C development environment as the first image, but with a different error message. The code editor displays a C program with the following content:

```
1 int main(){
2     /*no main*/
3     int d;
4     int h;
5     int u;
6
7     int foo(){
8         int k1;
9         int k2;
10        if(k1 == k2){
11            return k1;
12        }
13    }
14
15    return d;
16
17 }
18
19 int srgf(){
20 }
21
22 void main(){
23 }
24
25 }
```

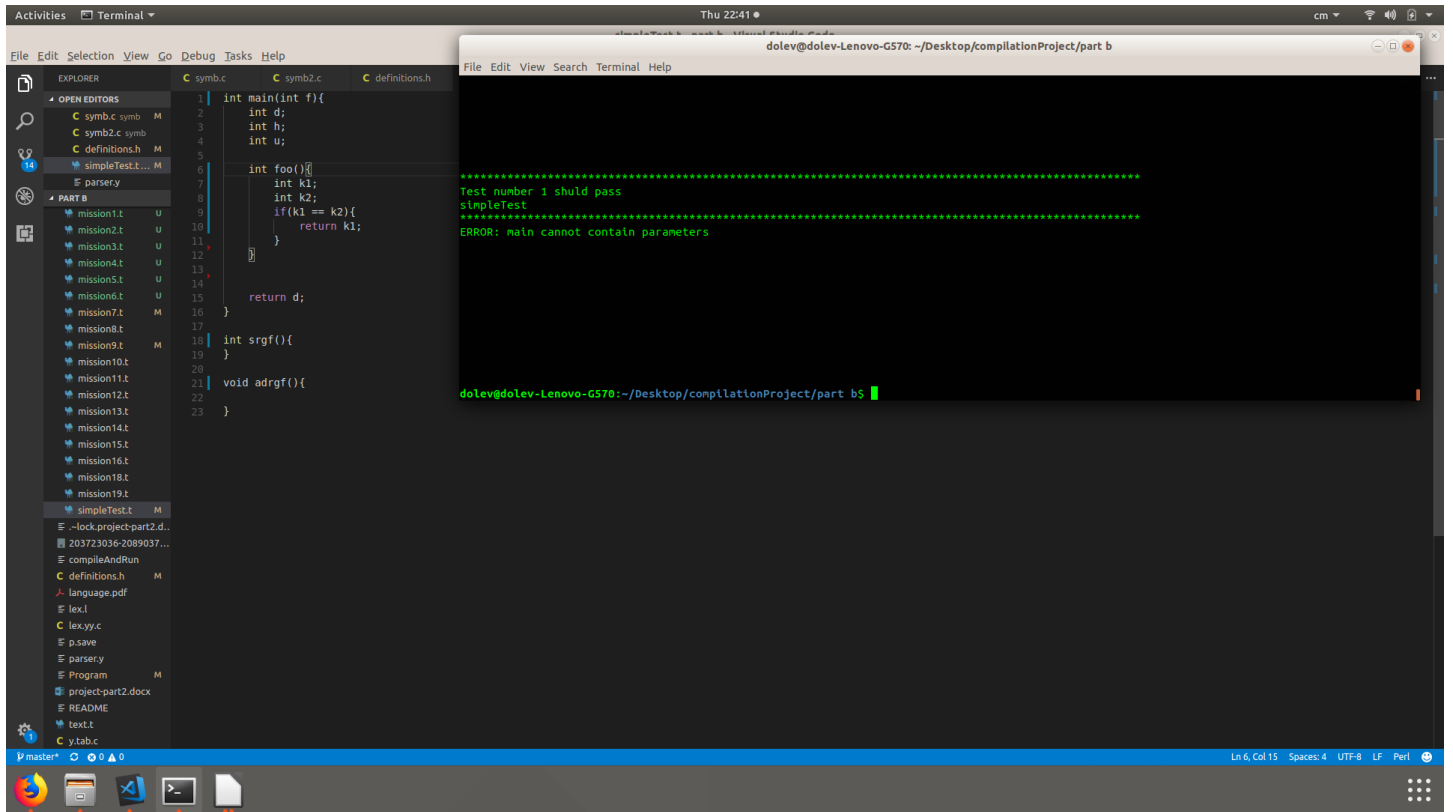
The terminal window shows the output of the compilation process:

```
*****
Test number 1 shuld pass
simpleTest
*****
ERROR: to many main functions, need to be just one.

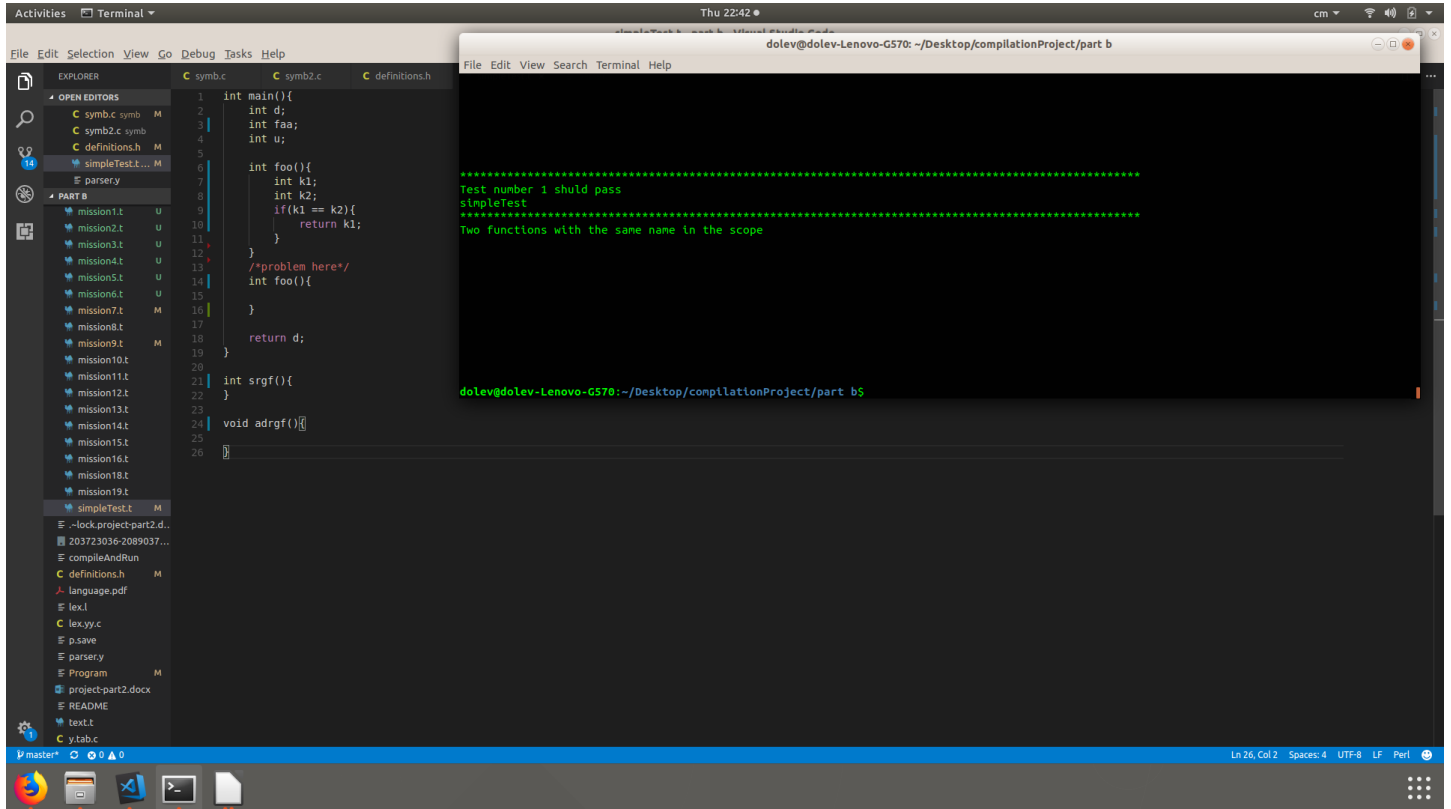
dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$
```

The status bar at the bottom indicates the current position is Line 16, Column 14.

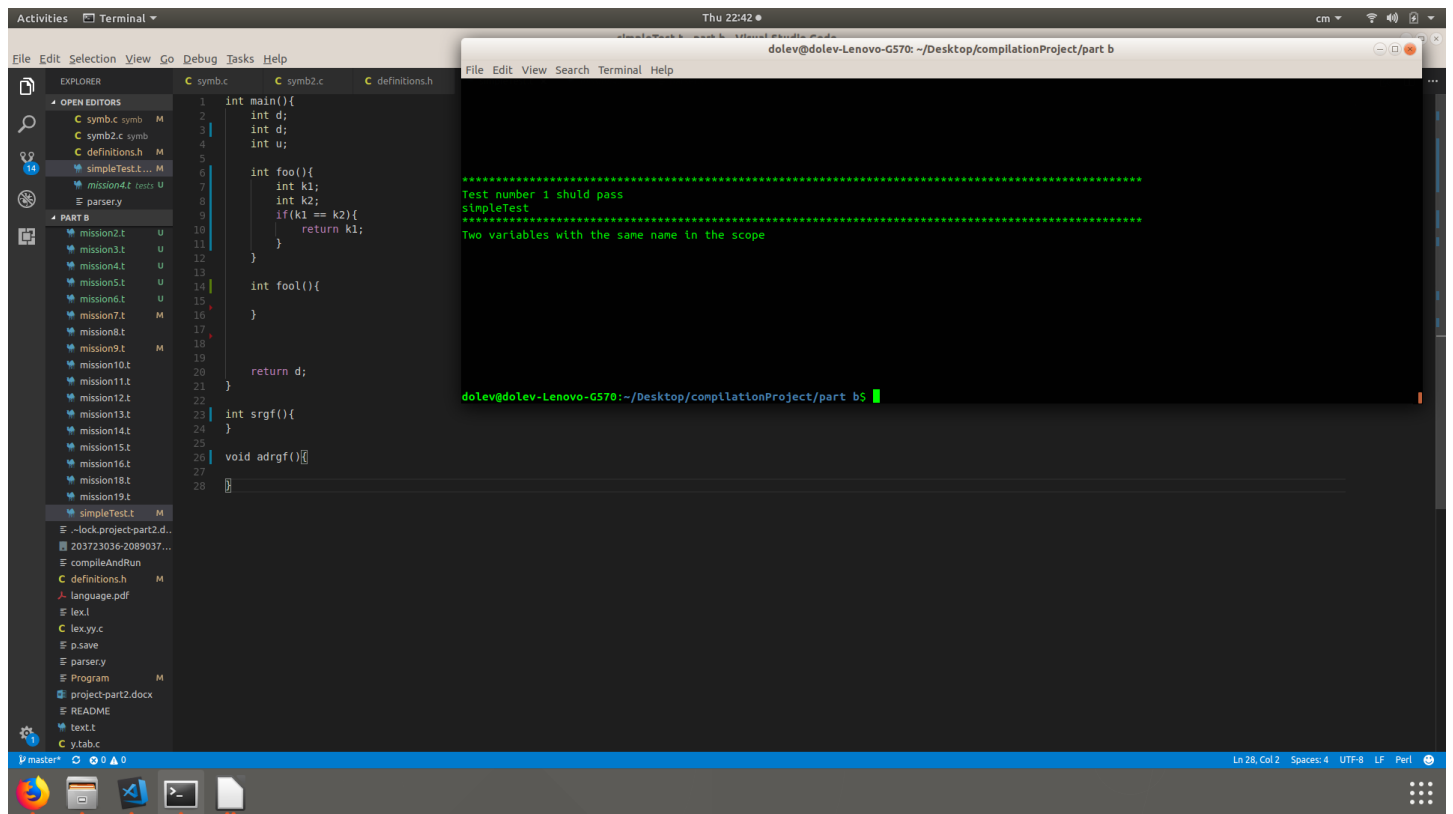
Mission 2



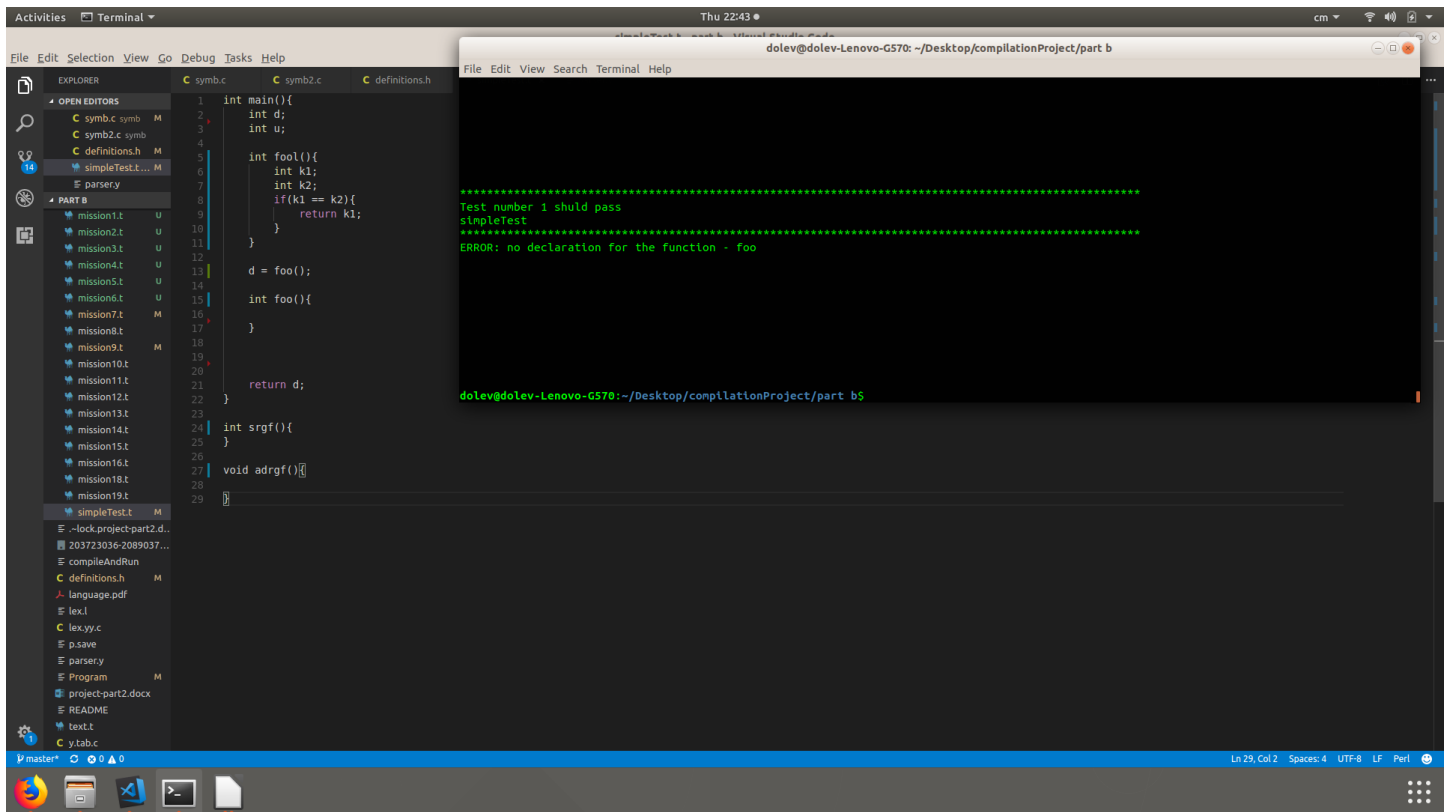
Mission 3



Mission 4



Mission 5



The screenshot shows a Linux desktop environment with a code editor and a terminal window. The code editor displays a C program with a syntax error. The terminal window shows the output of a compilation command.

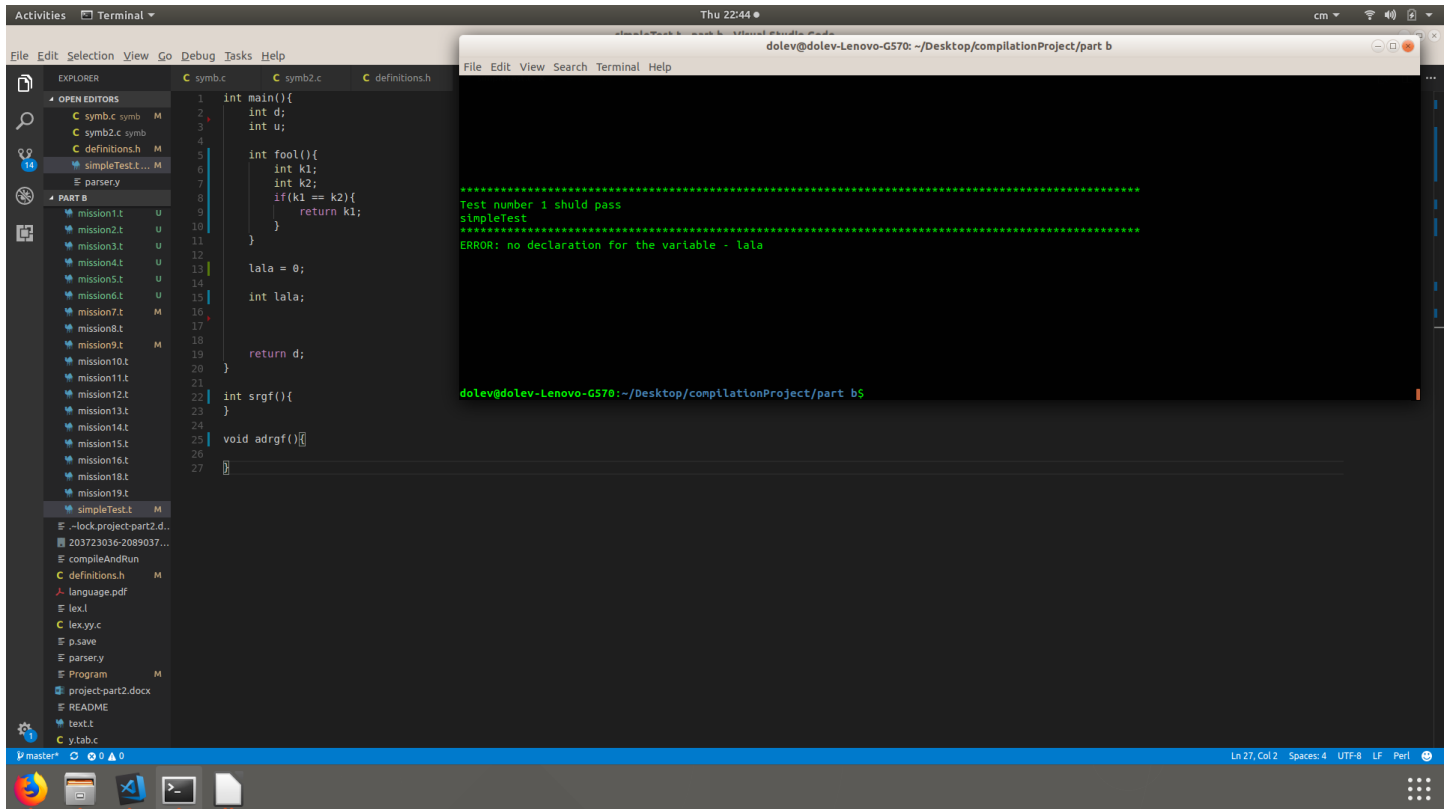
Code Editor Content:

```
1 int main(){
2     int d;
3     int u;
4
5     int fool(){
6         int k1;
7         int k2;
8         if(k1 == k2){
9             return k1;
10        }
11    }
12
13    d = fool();
14
15    int fool(){
16    }
17
18    return d;
19 }
20
21
22
23
24 int srgf(){
25 }
26
27 void adrgf(){
28 }
29 }
```

Terminal Window Content:

```
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b
*****
Test number 1 shuld pass
simpleTest
*****
ERROR: no declaraton for the function - foo
dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$
```

Mission 6



The screenshot shows a Linux desktop environment with a code editor and a terminal window. The code editor displays a C program with a compilation error. The terminal window shows the output of the compilation, including a test result and an error message.

Code Editor Content:

```
1 int main(){
2     int d;
3     int u;
4
5     int fool(){
6         int k1;
7         int k2;
8         if(k1 == k2){
9             return k1;
10        }
11    }
12
13    lala = 0;
14
15    int lala;
16
17
18    return d;
19 }
20
21
22 int srgf(){
23 }
24
25 void adrgf(){
26 }
27
```

Terminal Window Content:

```
*****
Test number 1 shuld pass
simpleTest
*****
ERROR: no declaration for the variable - lala

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

Mission 7

The screenshot shows a code editor with a C program. The program has a syntax error: `h(pp,f,r,s);` on line 11, which has 5 arguments. The terminal window shows the output of the program, which includes a test failure message: `Test number 1 shuld pass` (note the typo 'shuld').

```
1 int main(){
2     void h(char k,int k,int sd){
3         int k1;
4         int k2;
5         if(k1 == k2){
6             /*nothing*/
7         }
8     }
9     int k(){}
10
11    h(pp,f,r,s);
12    int o;
13    o = 34;
14 }
15
16 int maffin(){
17 }
18
19 void fman(){
20 }
21
22
23
24
```

```
*****
Test number 1 shuld pass
simpleTest
*****
To many arguments in function h
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

The screenshot shows a code editor with a C program. The program has a syntax error: `h(pp,f);` on line 11, which has 3 arguments. The terminal window shows the output of the program, which includes a test failure message: `Test number 1 shuld pass` (note the typo 'shuld').

```
1 int main(){
2     void h(char k,int k,int sd){
3         int k1;
4         int k2;
5         if(k1 == k2){
6             /*nothing*/
7         }
8     }
9     int k(){}
10
11    h(pp,f);
12    int o;
13    o = 34;
14 }
15
16 int maffin(){
17 }
18
19 void fman(){
20 }
21
22
23
24
```

```
*****
Test number 1 shuld pass
simpleTest
*****
To few arguments in function h
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

Mission 8

The screenshot shows a code editor with two windows. The left window displays a C program with the following code:

```
1 int main() {
2     int r;
3     int f;
4     int pp;
5     void h(char k, int k, int sd) {
6         int k1;
7         int k2;
8         if(k1 == k2) {
9             /*nothing*/
10        }
11    }
12    int k() {}
13
14    h(pp, f, r);
15    int o;
16    o = 34;
17
18    //k(A,B);
19 }
20
21 int maffin() {
22 }
23
24
25 void fman() {
26 }
27 }
```

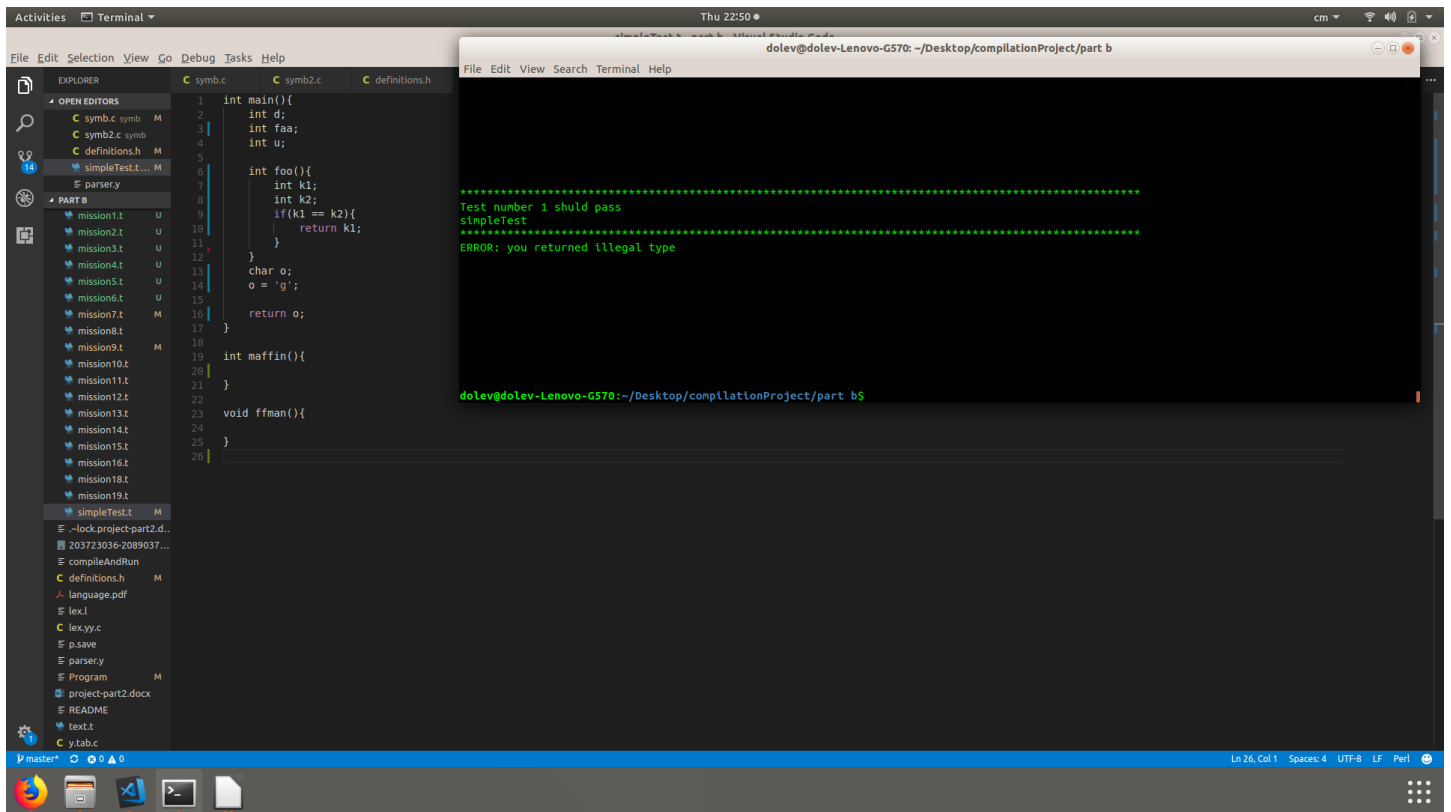
The right window shows the compilation output:

```
*****
Test number 1 shuld pass
simplerest
*****
ERROR: variable type not match

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

The status bar at the bottom indicates the current line is 27, column 2, with 4 spaces, in UTF-8 encoding, LF line endings, and Perl syntax highlighting.

Mission 9



Mission 10

The screenshot shows a code editor with a C program. The program defines a function `main()` and a function `ffman()`. The `main()` function declares variables `r`, `f`, `pp`, `h`, `k1`, and `k2`. It calls `h()` and `ffman()`. The `ffman()` function declares variables `l` and `k` and calls `l=k()`. The compiler reports an error: "ERROR: The function have different type from variable".

```
1 int main(){
2     int r;
3     int f;
4     int pp;
5     int h(){
6         int k1;
7         int k2;
8         if(k1 == k2){
9             /*nothing*/
10        }
11    }
12    int k(){
13
14    }
15
16    int o;
17    o = h();
18
19 }
20
21 int maffin(){
22     void k(){}
23     int l;
24
25     if(l==0){
26         //dds
27     }
28     l=k();
29 }
30
31 void ffman(){}
32
33
```

Terminal output:

```
*****
Test number 1 shuld pass
simpleTest
*****
ERROR: The function have different type from variable

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

Mission 11

The screenshot shows a code editor with a C program. The left sidebar displays a file explorer with a list of files including 'mission11.t', 'simpleTest.t', and 'PART B'. The main editor area shows the following C code:

```
1 int main(){
2     int r;
3     int f;
4     int pp;
5     int h(){
6         int k1;
7         int k2;
8         if(k1 == k2){
9             /*nothing*/
10        }
11    }
12    int k(){
13
14    }
15    int o;
16    o = h();
17 }
18
19 int maffin(){
20     int l;
21
22     /*problem here*/
23     if(9 + 1){
24         //dds
25     }
26 }
27
28 void ffman(){
29
30 }
```

The right sidebar shows the output of the compilation, which includes the text "Test number 1 shuld pass" and "ERROR: expression in if statment is not boolean". The status bar at the bottom indicates the current line is 22, column 19, with 4 spaces, UTF-8 encoding, and LF line endings.

Mission 12

The screenshot shows the Visual Studio Code editor with a C program in `simpleTest.c` and its execution output in a terminal window.

Code in `simpleTest.c`:

```
1 int main(){
2     int r;
3     int f;
4
5     int k(){}
6
7     for(r = 0; r + 7 ; r = r + 1){
8
9     }
10
11 }
12
13 int maffin(){
14     int l;
15
16     if(l == 1){
17         //dds
18     }
19
20 }
21 void fman(){}
22
23 }
```

Terminal Output:

```
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b
File Edit View Search Terminal Help

*****
Test number 1 shuld pass
simpleTest
*****
ERROR: expression in if statment is not boolean

dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$
```

The terminal output shows a compilation error: "ERROR: expression in if statment is not boolean". This error is due to the variable `l` being uninitialized in the `maffin` function, where it is used in a conditional statement `if(l == 1)`.

Mission 13

The screenshot shows the Visual Studio Code editor with the following components:

- Explorer:** Lists files in the project, including `mission2.t` through `mission19.t`, `simpleTest.t`, and various support files like `lock.project-part2.d...`, `203723036-2089037...`, `compileAndRun`, `definitions.h`, `language.pdf`, `lex.l`, `lex.yy.c`, `p.save`, `parser.y`, `Program`, `project-part2.docx`, `README`, `text.t`, and `y.tab.c`.
- Editor:** Displays the source code for `simpleTest.t`. The code is as follows:

```
1 int main(){
2     int r;
3     int f;
4     string y[r + 1 + 'd'];
5 }
6
7
8 int maffin(){
9     int l;
10    void foo(){
11        if(l == 1){
12            //dds
13        }
14    }
15 }
16
17 void fman(){
18 }
19 }
```
- Terminal:** Shows the output of the program execution. The output is:

```
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b
File Edit View Search Terminal Help

*****
Test number 1 shuld pass
simpleTest
*****
ERROR: Illegal type ->'d'

dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part bs
```

Mission 14

The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left lists files in the 'PART B' folder, including mission2.t through mission19.t, simpleTest.t, and y.tab.c. The main editor window displays the code for 'simpleTest.t'.

```
1 int main(){
2     int r;
3     int f;
4     char l;
5
6     string o[7];
7
8     r[f]="f";
9
10
11     if(l == 1){
12         //dds
13     }
14
15 int maffin(){
16     int l;
17     void foo(){
18         if(l == 1){
19             //dds
20         }
21     }
22 }
23
24 void fman(){}
25
26
```

Below the code editor, a terminal window is open, showing the output of the program. The output indicates a test failure due to an illegal type.

```
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b
File Edit View Search Terminal Help

Test number 1 shuld pass
simpleTest
ERROR: illegal type ->r

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

The status bar at the bottom of the editor shows 'Ln 26, Col 2', 'Spaces: 4', 'UTF-8', 'LF', and 'Perl'.

Mission 15

The screenshot shows the Visual Studio Code editor with a C program open. The file explorer on the left shows a project structure with files like `simpleTest.t`, `mission1.t`, `mission2.t`, etc. The main editor window displays the code for `simpleTest.t`. The code is as follows:

```
1 int main(){
2     int r;
3     int f;
4     char l;
5     string o;
6     charp gll;
7
8
9     l = null;
10    o="ddasf";
11
12
13    gll = null;
14    ///**problem here*/
15    l = f;
16 }
17
18 int maffin(){
19     int l;
20     void foo(){
21         if(l == 1){
22             //dds
23         }
24     }
25 }
26
27 void fman(){
28 }
29 }
```

A terminal window is open in the foreground, showing the output of the compilation process. The output is as follows:

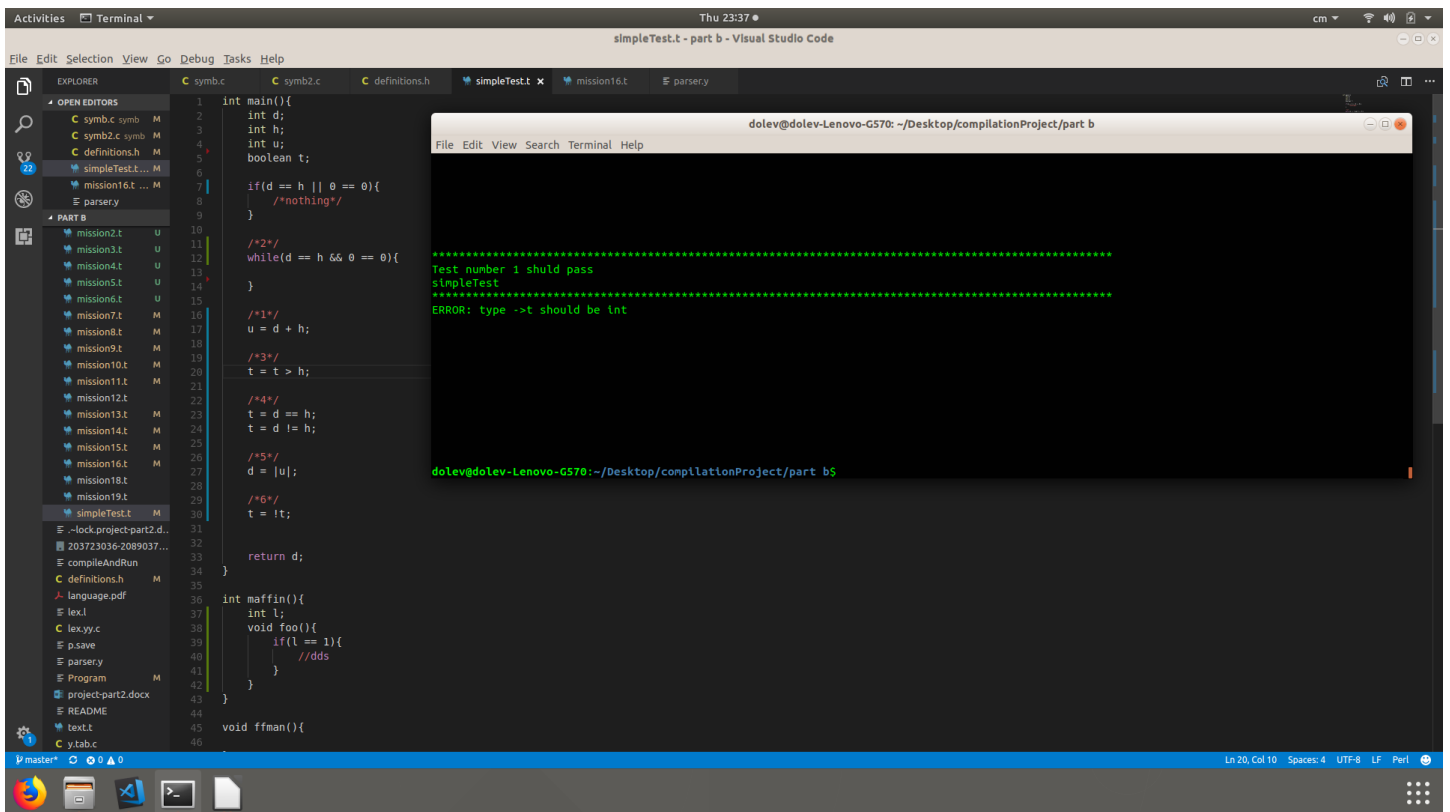
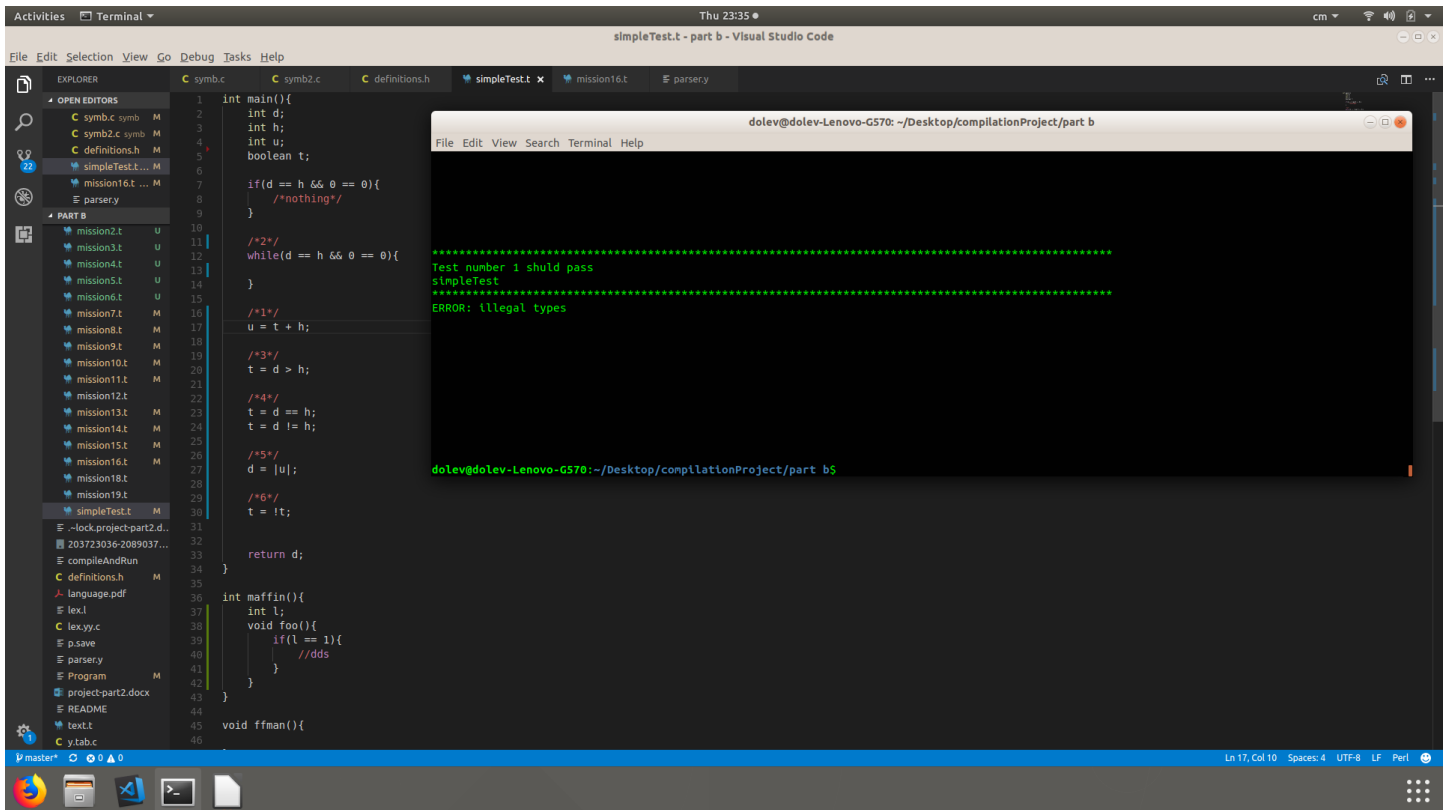
```
dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b
File Edit View Search Terminal Help

Test number 1 shuld pass
simpleTest
ERROR: illegal types
->l
->f

dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$
```

The error message "ERROR: illegal types" indicates a problem with the code, likely related to the use of `string` and `charp` types. The terminal window also shows the prompt `dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$`.

Mission 16



Mission 16

The screenshot shows the Visual Studio Code editor with the file `simpleTest.t` open. The code is a C program that defines a function `maffin()` and a function `ffman()`. The `maffin()` function takes an integer `l` and returns a value based on a series of conditional checks. The `ffman()` function calls `maffin()` and returns its result. The program is compiled and run, and the output is shown in the terminal window.

```
if(d == h || 0 == 0){
    /*nothing*/
}

/*2*/
while(d == h && 0 == 0){
}

/*1*/
u = d + h;

/*3*/
t = d > h;

/*4*/
t = d == t;
t = d != h;

/*5*/
d = |u|;

/*6*/
t = !t;

return d;

int maffin(){
    int l;
    void foo(){
        if(l == 1){
            //dds
        }
    }
}

void fman(){
}
```

Terminal output:

```
Test number 1 shuld pass
simpleTest
ERROR: types ->d
->t
not matches

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

The screenshot shows the Visual Studio Code editor with the file `simpleTest.t` open. The code is a C program that defines a function `maffin()` and a function `ffman()`. The `maffin()` function takes an integer `l` and returns a value based on a series of conditional checks. The `ffman()` function calls `maffin()` and returns its result. The program is compiled and run, and the output is shown in the terminal window.

```
int main(){
    int d;
    int h;
    int u;
    boolean t;
    string str;

    if(d == h || 0 == 0){
        /*nothing*/
    }

    /*2*/
    while(d == h && 0 == 0){
    }

    /*1*/
    u = d + h;

    /*3*/
    t = d > h;

    /*4*/
    t = d == h;
    t = d != h;

    /*5*/
    d = |t|;

    /*6*/
    t = !t;

    return d;

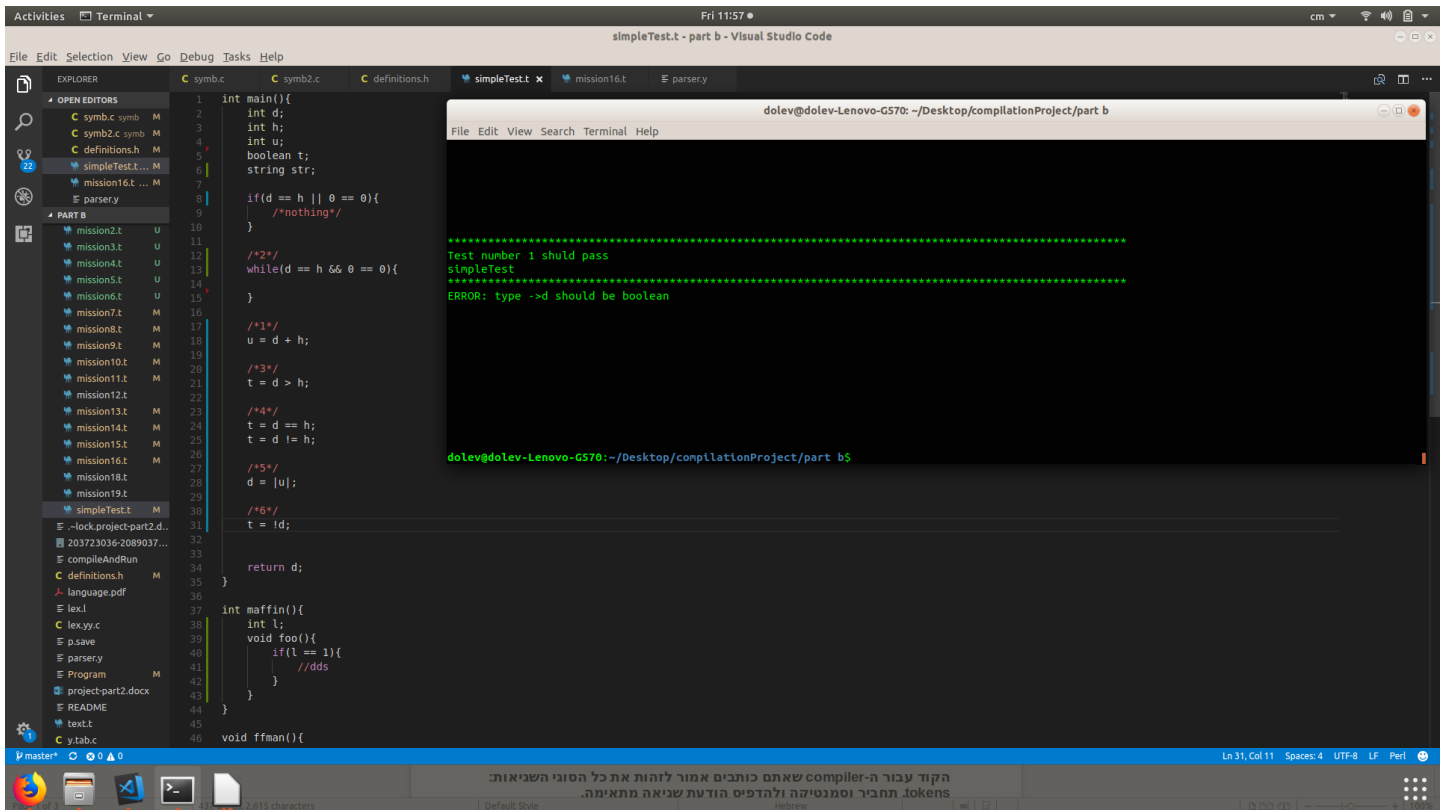
int maffin(){
    int l;
    void foo(){
        if(l == 1){
            //dds
        }
    }
}
```

Terminal output:

```
Test number 1 shuld pass
simpleTest
ERROR: type ->t should be int or string

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

Mission 16



```
1 int main(){
2     int d;
3     int h;
4     int u;
5     boolean t;
6     string str;
7
8     if(d == h || 0 == 0){
9         /*nothing*/
10    }
11
12    /*2*/
13    while(d == h && 0 == 0){
14
15    }
16
17    /*1*/
18    u = d + h;
19
20    /*3*/
21    t = d > h;
22
23    /*4*/
24    t = d == h;
25    t = d != h;
26
27    /*5*/
28    d = |u|;
29
30    /*6*/
31    t = !d;
32
33    return d;
34
35 }
36
37 int maffin(){
38     int l;
39     void foo(){
40         if(l == 1){
41             //dds
42         }
43     }
44 }
45
46 void fman(){
```

```
Test number 1 shuld pass
simpleTest
ERROR: type ->d should be boolean

dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b$
```

Mission 18

The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left lists files including 'mission18.t' and 'simpleTest.t'. The main editor window displays the code for 'simpleTest.t', which is a C program. The code defines a 'main' function that declares variables 'd', 'h', 'u', 'p1', 'p2', 'p3', 'p4', and 't'. It includes an if-statement, a while-loop, and several assignments. The program returns 'd'. A terminal window is open in the foreground, showing the execution output. The output indicates a compilation error: 'ERROR: illegal type ->p4'. The terminal prompt is 'dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b\$'.

```
1 int main(){
2   int d;
3   int h;
4   int u;
5
6   char p1;
7   string p2;
8   int p3;
9   boolean p4;
10
11   boolean t;
12
13   if(d == h && 0 == 0){
14     /*nothing*/
15   }
16
17   while(d == h && 0 == 0){
18     d = d + h;
19   }
20
21   p1 = 6p1;
22   p2 = 6p2;
23   p3 = 6p3;
24   /*problem here*/
25   p4 = 6p4;
26
27   return d;
28 }
29
30 int maffin(){
31   int l;
32   void foo(){
33     if(l == 1){
34       //dds
35     }
36   }
37   void fman(){}
38 }
```

Output in terminal:

```
*****
Test number 1 shuld pass
simpleTest
*****
ERROR: illegal type ->p4
dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$
```

Mission 19

The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left lists files including `simpleTest.t`, `mission19.t`, and `parser.y`. The main editor displays the content of `simpleTest.t`, which is a C program. The program defines a `main` function that initializes variables `d`, `h`, `u`, `p1`, `p2`, `p4`, and `t`. It contains an `if` statement, a `while` loop, and a `return` statement. A comment `/*problem here*/` is present near line 25. The program also includes a `maffin` function and a `ffman` function. A terminal window titled `dolev@dolev-Lenovo-G570: ~/Desktop/compilationProject/part b` is open, showing the output of the program. The output indicates that the test number 1 should pass, but there is a compilation error: `ssERROR: illegal type ->p4`. The terminal prompt is `dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b$`.

```
1 int main(){
2     int d;
3     int h;
4     int u;
5
6     charp p1;
7     intp p2;
8     boolean p4;
9
10
11     boolean t;
12
13     if(d == h && 0 == 0){
14         /*nothIng*/
15     }
16
17     while(d == h && 0 == 0){
18         d = d + h;
19     }
20
21
22     p1 = "p1;
23     p2 = "p2;
24     /*problem here*/
25     p4 = "p4;
26
27
28     return d;
29 }
30
31 int maffin(){
32     int l;
33     void foo(){
34         if(l == 1){
35             //dds
36         }
37     }
38 }
39 void ffman(){
40 }
41 }
```

Test number 1 shuld pass
simpleTest
ssERROR: illegal type ->p4
dolev@dolev-Lenovo-G570:~/Desktop/compilationProject/part b\$