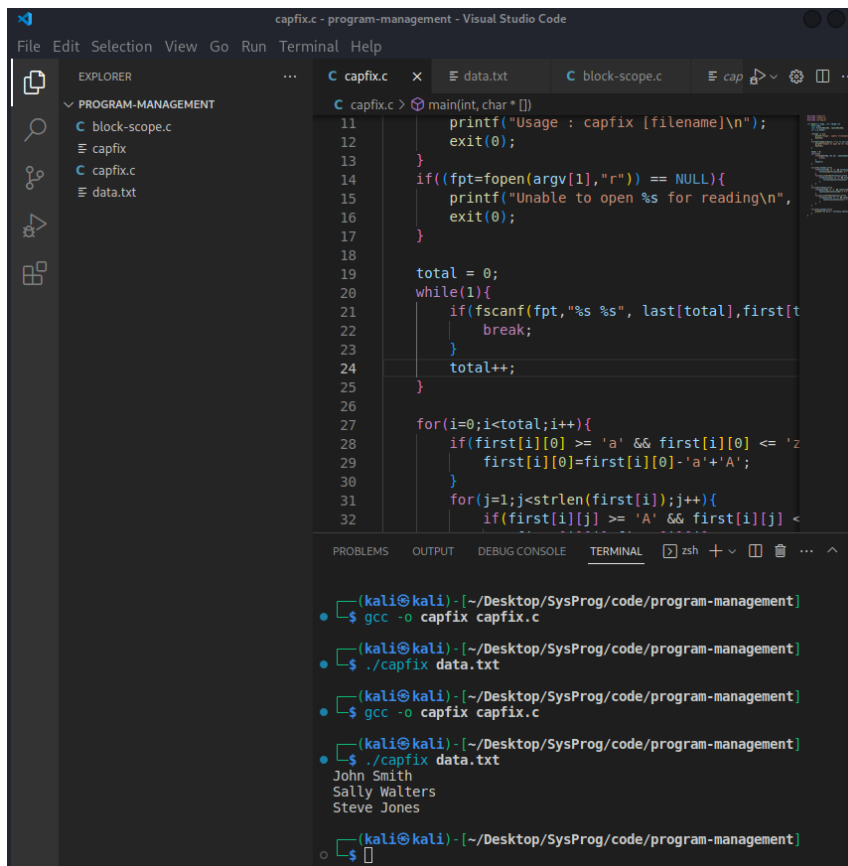


Nama Anggota kelompok:
Supit, Vincent Vian
Tiwouw, Joseph Janone
Rumengan, Prisilia
Quiz - Syspro
Capfix.c



The screenshot shows the Visual Studio Code editor with the file 'capfix.c' open. The code is a C program that reads data from 'data.txt' and processes it. The terminal shows the compilation and execution of the program.

```
capfix.c - program-management - Visual Studio Code
File Edit Selection View Go Run Terminal Help

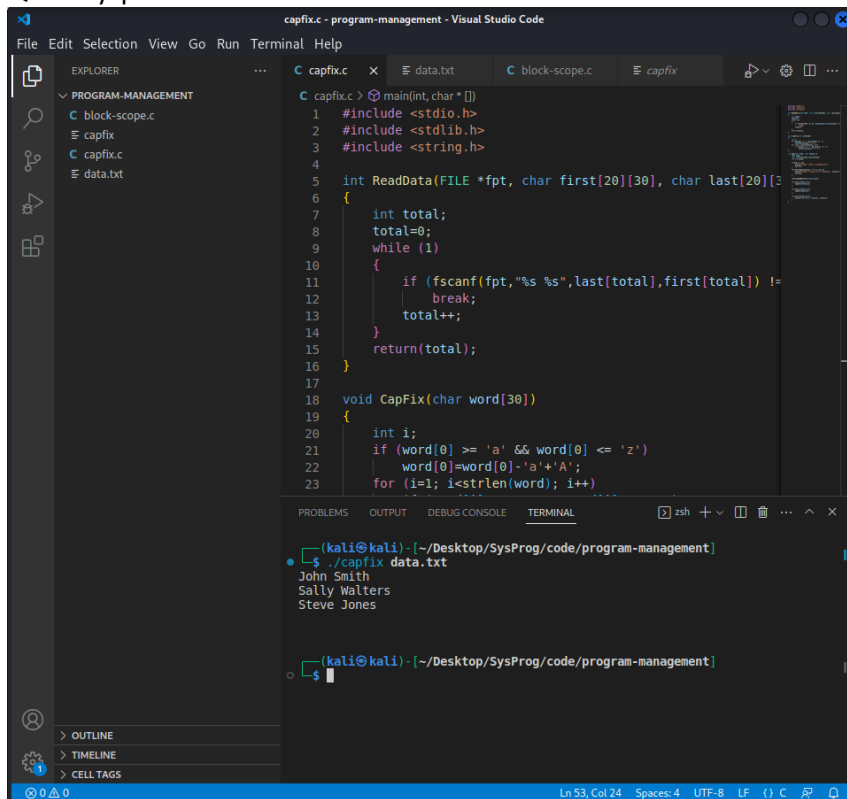
EXPLORER
PROGRAM-MANAGEMENT
  block-scope.c
  capfix
  capfix.c
  data.txt

capfix.c
11  printf("Usage : capfix [filename]\n");
12  exit(0);
13  }
14  if((fpt=fopen(argv[1],"r")) == NULL){
15      printf("Unable to open %s for reading\n",
16          exit(0);
17  }
18
19  total = 0;
20  while(1){
21      if(fscanf(fpt,"%s %s", last[total],first[t
22          break;
23      }
24      total++;
25  }
26
27  for(i=0;i<total;i++){
28      if(first[i][0] >= 'a' && first[i][0] <= 'z
29          first[i][0]=first[i][0]-'a'+'A';
30      }
31      for(j=1;j<strlen(first[i]);j++){
32          if(first[i][j] >= 'A' && first[i][j] <

TERMINAL
(kali@kali) ~/Desktop/SysProg/code/program-management
$ gcc -o capfix capfix.c
(kali@kali) ~/Desktop/SysProg/code/program-management
$ ./capfix data.txt
(kali@kali) ~/Desktop/SysProg/code/program-management
$ gcc -o capfix capfix.c
(kali@kali) ~/Desktop/SysProg/code/program-management
$ ./capfix data.txt
John Smith
Sally Walters
Steve Jones
(kali@kali) ~/Desktop/SysProg/code/program-management
$
```

Pada gambar ini menggunakan single function, yang dimana seluruh perintah mulai dari read data sampai di tampilkan ditulis dalam satu fungsi.

Nama Anggota kelompok:
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Rumengan, Prisilia
Quiz - Syspro



```
capfix.c - program-management - Visual Studio Code
File Edit Selection View Go Run Terminal Help

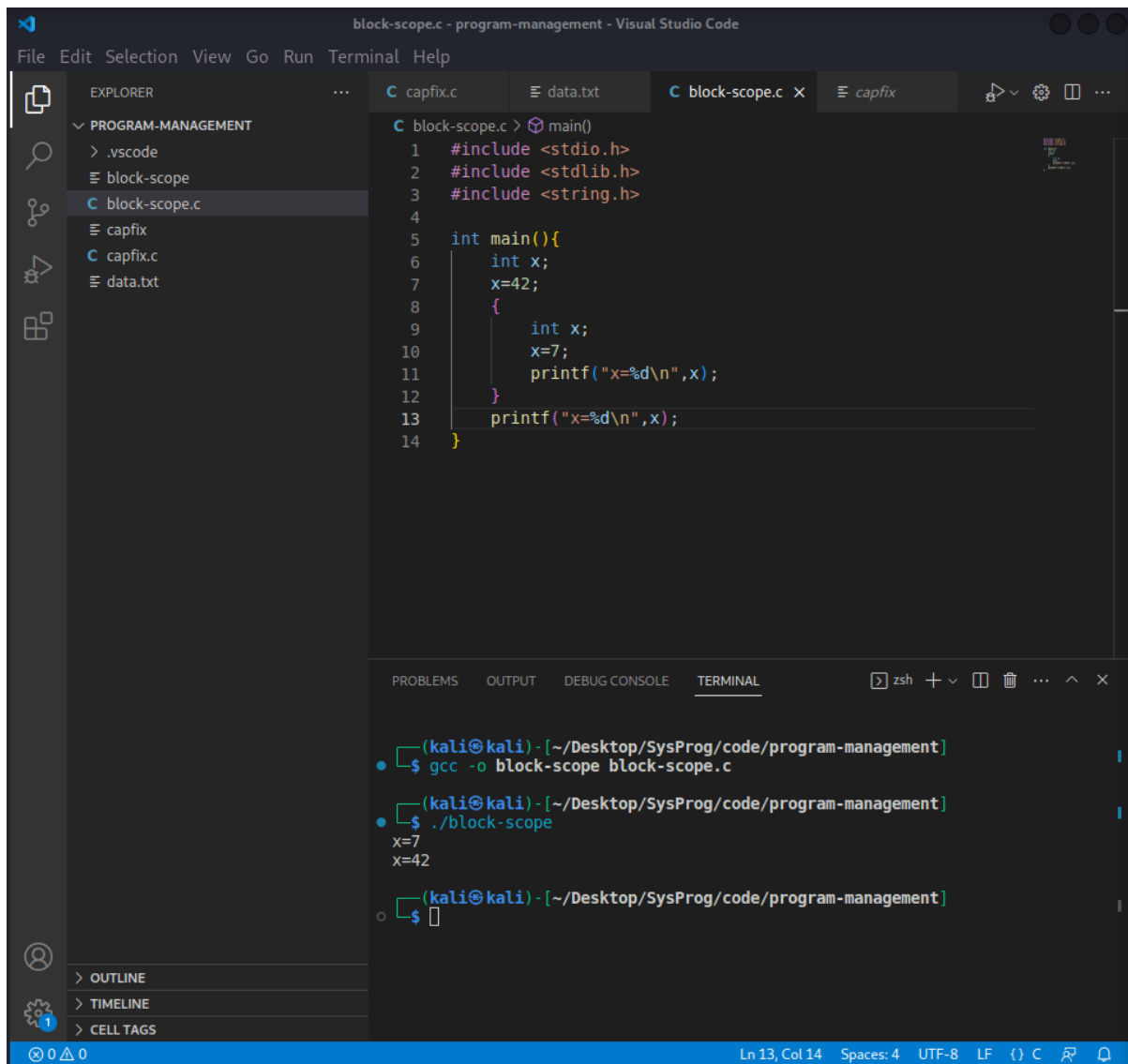
EXPLORER
PROGRAM-MANAGEMENT
  block-scope.c
  capfix
  capfix.c
  data.txt

capfix.c
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4
5 int ReadData(FILE *fpt, char first[20][30], char last[20][30])
6 {
7     int total;
8     total=0;
9     while (1)
10    {
11        if (fscanf(fpt,"%s %s",last[total],first[total]) !=
12            break;
13        total++;
14    }
15    return(total);
16 }
17
18 void CapFix(char word[30])
19 {
20     int i;
21     if (word[0] >= 'a' && word[0] <= 'z')
22         word[0]=word[0]-'a'+'A';
23     for (i=1; i<strlen(word); i++)
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
zsh
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$ ./capfix data.txt
John Smith
Sally Walters
Steve Jones
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$
```

Pada gambar ini menggunakan multiple function yaitu ; ReadData, CapFix, dan Int main. Hal ini untuk mempermudah penulisan code dan mempersingkat

Nama Anggota kelompok:
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Rumengan, Prisilia
Quiz - Syspro
Block-scope.c



The screenshot shows the Visual Studio Code interface with a C program named `block-scope.c` open. The Explorer sidebar on the left shows the project structure under `PROGRAM-MANAGEMENT`, including `.vscode`, `block-scope`, `block-scope.c`, `capfix`, `capfix.c`, and `data.txt`. The main editor displays the following C code:

```
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4
5 int main(){
6     int x;
7     x=42;
8     {
9         int x;
10        x=7;
11        printf("x=%d\n",x);
12    }
13    printf("x=%d\n",x);
14 }
```

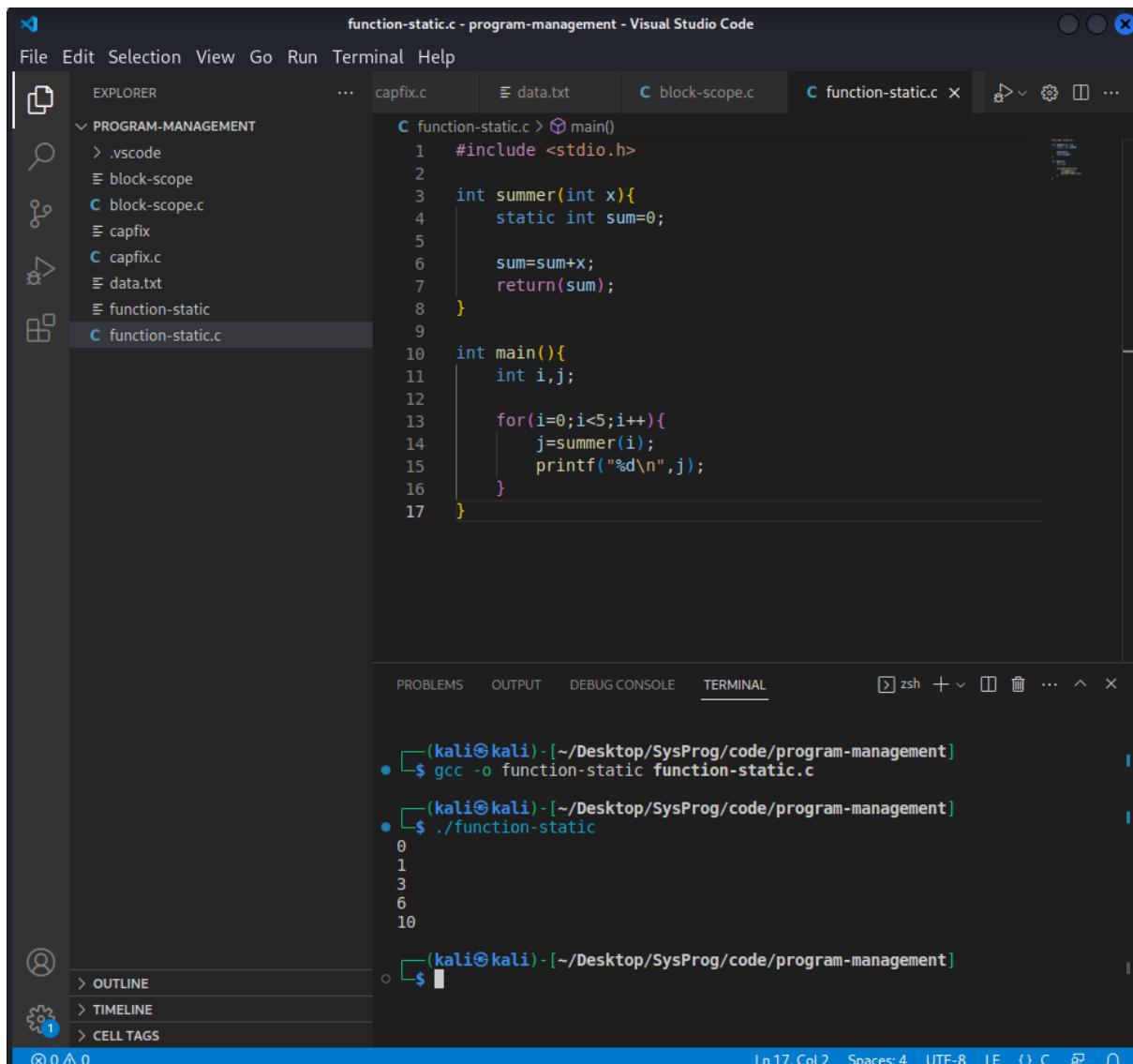
The bottom panel shows the TERMINAL output, which includes the compilation and execution commands and their results:

```
(kali㉿kali) - [~/Desktop/SysProg/code/program-management]
• $ gcc -o block-scope block-scope.c
• $ ./block-scope
x=7
x=42
• $
```

The status bar at the bottom indicates the current position is Line 13, Column 14, with 4 spaces, UTF-8 encoding, LF line endings, and C language mode.

Deklarasi x yang kedua dibatasi dengan satu set kurung kurawal dan hanya berlaku di blok tersebut, setelah blok tersebut selesai maka variabel itu akan menghilang dan kembali menjadi x yang di deklarasi pertama kali yaitu 42

Nama Anggota kelompok:
Supit, Vincent Vian
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Quiz - Syspro
Function-static.c



The screenshot shows the Visual Studio Code editor with a C program named `function-static.c` open. The Explorer sidebar on the left shows the project structure under `PROGRAM-MANAGEMENT`, including files like `block-scope.c`, `capfix.c`, `data.txt`, `function-static`, and `function-static.c`. The main editor displays the following C code:

```
function-static.c > main()
1  #include <stdio.h>
2
3  int summer(int x){
4      static int sum=0;
5
6      sum=sum+x;
7      return(sum);
8  }
9
10 int main(){
11     int i,j;
12
13     for(i=0;i<5;i++){
14         j=summer(i);
15         printf("%d\n",j);
16     }
17 }
```

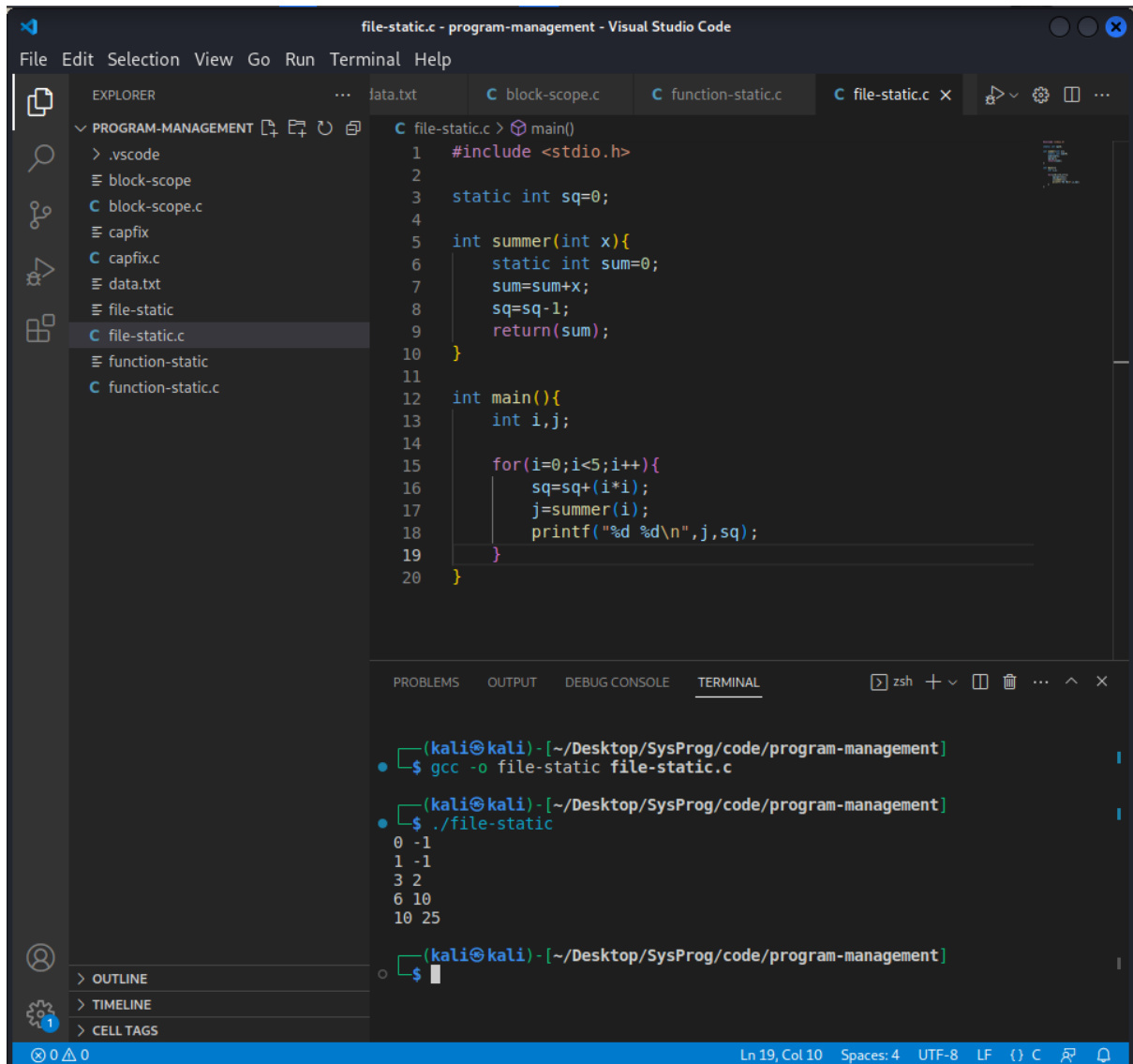
Below the code editor, the TERMINAL panel shows the execution of the program. The commands and their outputs are as follows:

```
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$ gcc -o function-static function-static.c
$ ./function-static
0
1
3
6
10
$
```

The status bar at the bottom indicates the current line and column: `Ln 17, Col 2`, with 4 spaces, UTF-8 encoding, and LF line endings.

Pada code ini setiap kali fungsi summer di panggil maka nilai variabel sum akan tetap dipertahankan lalu di tambahkan dengan nilai x yang di pasing.

Nama Anggota kelompok:
Supit, Vincent Vian
Tiwouw, Joseph Janone
Rumengan, Prisilia
Quiz - Syspro
File-static.c



```
file-static.c - program-management - Visual Studio Code
File Edit Selection View Go Run Terminal Help

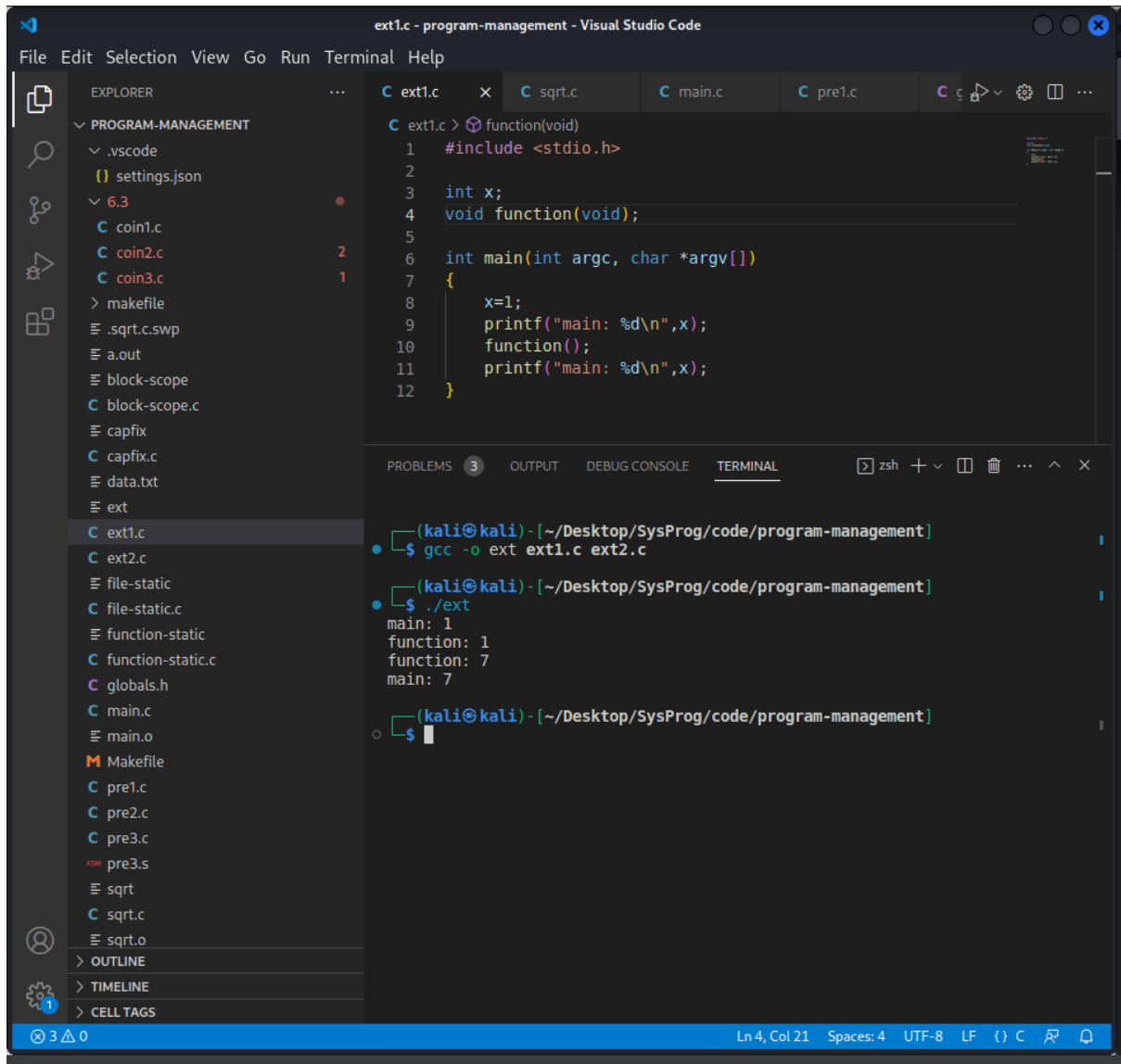
EXPLORER
PROGRAM-MANAGEMENT
  .vscode
  block-scope
  block-scope.c
  capfix
  capfix.c
  data.txt
  file-static
  file-static.c
  function-static
  function-static.c

file-static.c
1  #include <stdio.h>
2
3  static int sq=0;
4
5  int summer(int x){
6      static int sum=0;
7      sum=sum+x;
8      sq=sq+1;
9      return(sum);
10 }
11
12 int main(){
13     int i,j;
14
15     for(i=0;i<5;i++){
16         sq=sq+(i*i);
17         j=summer(i);
18         printf("%d %d\n",j,sq);
19     }
20 }
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$ gcc -o file-static file-static.c
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$ ./file-static
0 -1
1 -1
3 2
6 10
10 25
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$
```

Code ini menggunakan file statis yang mana hanya memiliki ruang lingkup untuk fungsi yang muncul setelah deklarasinya, tapi di beberapa code di deklarasi dibagian atas agar semua fungsi dapat melihatnya.

Nama Anggota kelompok:
Supit, Vincent Vian
Tiwouw, Joseph Janone
Rumengan, Prisilia
Quiz - Syspro
Ext1.c, ext2.c



The screenshot shows the Visual Studio Code interface with the file explorer on the left, the editor in the center, and the terminal at the bottom. The file explorer shows a project named 'PROGRAM-MANAGEMENT' with various files including 'ext1.c', 'ext2.c', 'main.c', and 'pre1.c'. The editor displays the code for 'ext1.c', which includes a function definition and a main function. The terminal shows the compilation and execution of the program, with output indicating the values of 'x' in the main and function scopes.

```
ext1.c - program-management - Visual Studio Code
File Edit Selection View Go Run Terminal Help

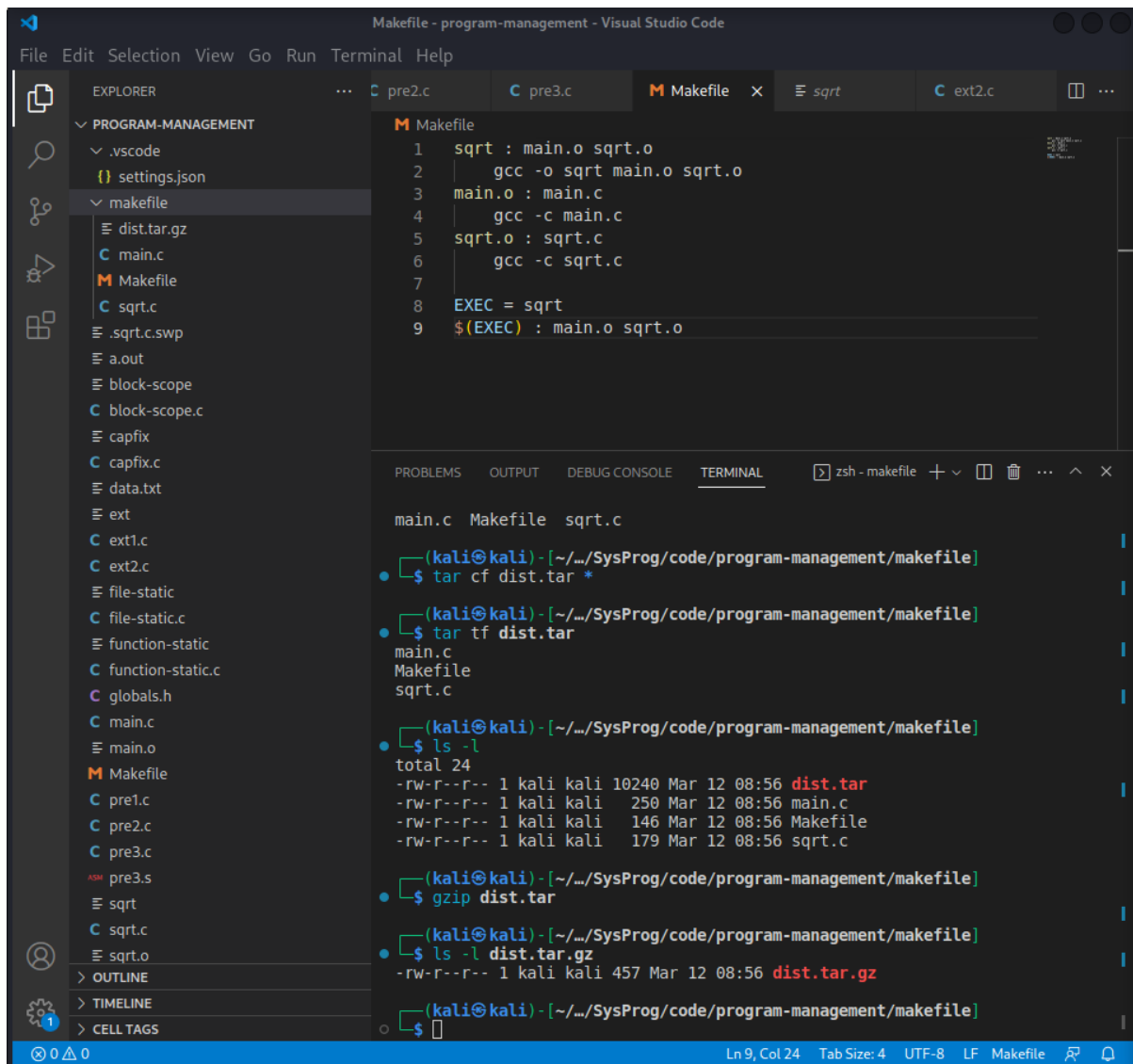
EXPLORER
PROGRAM-MANAGEMENT
  .vscode
  settings.json
  6.3
  coin1.c
  coin2.c
  coin3.c
  > makefile
  .sqr.c.swp
  a.out
  block-scope
  block-scope.c
  capfix
  capfix.c
  data.txt
  ext
  ext1.c
  ext2.c
  file-static
  file-static.c
  function-static
  function-static.c
  globals.h
  main.c
  main.o
  Makefile
  pre1.c
  pre2.c
  pre3.c
  pre3.s
  sqrt
  sqrt.c
  sqrt.o
  > OUTLINE
  > TIMELINE
  > CELL TAGS

C ext1.c x C sqrt.c C main.c C pre1.c C
C ext1.c > function(void)
1  #include <stdio.h>
2
3  int x;
4  void function(void);
5
6  int main(int argc, char *argv[])
7  {
8      x=1;
9      printf("main: %d\n",x);
10     function();
11     printf("main: %d\n",x);
12 }

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$ gcc -o ext ext1.c ext2.c
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$ ./ext
main: 1
function: 1
function: 7
main: 7
(kali@kali) - [~/Desktop/SysProg/code/program-management]
$
```

Pada file ext2.c variabel x di deklarasi menggunakan extern. Nilai x dipertahankan melalui semua fungsi di kedua file. Variabel dalam lingkup global di di deklarasikan di salah satu file dan di referensikan di file lainnya yang ingin mengakses sebagai extern.

Nama Anggota kelompok:
Supit, Vincent Vian
Tiwouw, Joseph Janone
Rumengan, Prisilia
Quiz - Syspro
Program distribution



The screenshot shows the Visual Studio Code interface with a project named 'Makefile - program-management'. The Explorer sidebar on the left shows a file tree with various files including 'makefile', 'dist.tar.gz', 'main.c', 'Makefile', 'sqrt.c', and others. The main editor area displays the 'Makefile' content:

```
1 sqrt : main.o sqrt.o
2 | gcc -o sqrt main.o sqrt.o
3 main.o : main.c
4 | gcc -c main.c
5 sqrt.o : sqrt.c
6 | gcc -c sqrt.c
7
8 EXEC = sqrt
9 $(EXEC) : main.o sqrt.o
```

Below the editor, the TERMINAL panel shows the execution of commands in a 'zsh - makefile' shell:

```
main.c Makefile sqrt.c
• (kali@kali) - [~/SysProg/code/program-management/makefile]
• $ tar cf dist.tar *
• (kali@kali) - [~/SysProg/code/program-management/makefile]
• $ tar tf dist.tar
main.c
Makefile
sqrt.c
• (kali@kali) - [~/SysProg/code/program-management/makefile]
• $ ls -l
total 24
-rw-r--r-- 1 kali kali 10240 Mar 12 08:56 dist.tar
-rw-r--r-- 1 kali kali 250 Mar 12 08:56 main.c
-rw-r--r-- 1 kali kali 146 Mar 12 08:56 Makefile
-rw-r--r-- 1 kali kali 179 Mar 12 08:56 sqrt.c
• (kali@kali) - [~/SysProg/code/program-management/makefile]
• $ gzip dist.tar
• (kali@kali) - [~/SysProg/code/program-management/makefile]
• $ ls -l dist.tar.gz
-rw-r--r-- 1 kali kali 457 Mar 12 08:56 dist.tar.gz
• (kali@kali) - [~/SysProg/code/program-management/makefile]
• $
```

Pada gambar ini memperlihatkan bagaimana membuat archive file named dist,tar menggunakan perintah tar tf dist.tar. opsi perintah lainnya juga bisa dapat digunakan untuk mengekstrak file, menambahkan lebih banyak file archive file dan melakukan perintah lainnya. Program tar tidak menyediakan kompresi jadi hal itu bergantung pada alat kompresi gzip untuk kompresi dan dekompresi.