

Running GDB:

```
2 » gcc person.c -o person -g
```

```
2 »
```

Starting program: /Users/linus/Desktop/Embedded-OS-Enabling-Robotics/lab2/person

Temporary breakpoint 1, main () at person.c:20

```
20      strcpy(person.name, "John");
```

(gdb) n

```
21      person.age = 10;
```

(gdb) n

```
22      PrintPerson(&person);
```

(gdb) s

PrintPerson (person=0x7fff5fbff840) at person.c:13

```
13      person->name,
```

(gdb) n

```
14      person->age);
```

(gdb) print person

\$1 = (struct Person *) 0x7fff5fbff840

(gdb) print person->age

\$2 = 10

(gdb) n

```
12      printf("%s is %d years old\n",
```

(gdb) n

John is 10 years old

```
15      }
```

(gdb) n

main () at person.c:23

```
23      return 0;
```

(gdb) n

0x00007fff8b4f55ad in start () from /usr/lib/system/libdyld.dylib

(gdb) n

Single stepping until exit from function start,
which has no line number information.

[Inferior 1 (process 1825) exited normally]

(gdb)

Code:

```
/**
 * Print the menu and get a selection from the user.
 *
 * @return Number of selection.
 */
int PrintMenu()
{
    int sel;

    printf("Main menu:\n\n" );
    printf("1. Add a person\n" );
    printf("2. Find a person\n" );
    printf("3. Remove a person\n" );
    printf("4. Print the list\n" );
    printf("5. Exit\n\n" );
    printf("Select an option: " );

    // Scan a digit from the user
    scanf("%d", &sel);

    // Return the chosen digit
    return sel;
}
```

```
/**
 * Run the navigational loop
 *
 * @return Number on exit. 0 for no errors.
 */
int Run()
{
    int sel;

    // While true
    while(true) {

        // Print the menu and get a selection
        sel = PrintMenu();

        // Next step depends on the selection made
        switch(sel) {

            // User chose 1
            case 1:
                printf("You selected \"Add a person\"\n");
                break;

            // User chose 2
            case 2:
                printf("You selected \"Find a person\"\n");
                break;

            // User chose 3
            case 3:
                printf("You selected \"Remove a person\"\n");
                break;

            // User chose 4
            case 4:
                printf("You selected \"Print the list\"\n");
                break;
```

```
        // User chose 5
        case 5:
            printf("You selected \"Exit\"\\n");

            // Return here, with no errors, to exit the function.
            // Clean up will be next
            return 0;

        // User chose something not on the menu
        default:
            printf("Please enter a valid number from the menu!\\n\\n");
            break;
    }

    printf("-----\\n");
}
}
```

```
/**
 * Will create and process a linked list
 *
 * @return Number on exit. 0 for no errors.
 */
int main()
{
    // Run the loop
    Run();

    return 0;
} //end main
```

Running the Program:

```
» gcc personList.c -o personList
»
```

```
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Main menu:
```

1. Add a person
2. Find a person
3. Remove a person
4. Print the list
5. Exit

```
Select an option: 
```

```
Select an option: 1
You selected "Add a person"
-----
```

```
Select an option: 2
You selected "Find a person"
-----
```

```
Select an option: 3
You selected "Remove a person"
-----
```

```
Select an option: 4
You selected "Print the list"
-----
```

```
Select an option: 6
Please enter a valid number from the menu!
-----
```

```
Select an option: 5
You selected "Exit"
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```