

Assignment-4

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SECTION - A

```
prev = temp;
(gdb) print temp->data
$1 = 1
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) print temp->data
$2 = 2
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
```

```
Program received signal SIGSEGV, Segmentation fault.
0x000055555555520e in deleteNode (head=0x7fffffffdafe, key=6) at linkedlist.c:18
18         while (temp->data != key) {
(gdb) next
```

```
Program terminated with signal SIGSEGV, Segmentation fault.
The program no longer exists.
(gdb) continue
The program is not being run.
(gdb) █
```

Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<<http://www.gnu.org/software/gdb/bugs/>>.
Find the GDB manual and other documentation resources online at:
<<http://www.gnu.org/software/gdb/documentation/>>.

For help, type "help".
Type "apropos word" to search for commands related to "word"..
Reading symbols from ./a.out...
(gdb) run
Starting program: /home/student/Desktop/a.out

Program received signal SIGSEGV, Segmentation fault.
0x00005555555520e in deleteNode (head=0x7fffffffda0, key=6) at linkedlist.c:18

```
18 while (temp->data != key) {  
(gdb) list  
13     if (temp != NULL && temp->data == key) {  
14         *head = temp->next;  
15         free(temp);  
16         return;  
17     }  
18     while (temp->data != key) {  
19         prev = temp;  
20         temp = temp->next;  
21     }  
22     if (temp == NULL)  
(gdb) break 11  
Breakpoint 1 at 0x55555555551a9: file linkedlist.c, line 11.  
(gdb) run
```

The program being debugged has been started already.
Start it from the beginning? (y or n) y
Starting program: /home/student/Desktop/a.out

Breakpoint 1, deleteNode (head=0x55555555268 <printList+43>, key=0) at linkedlist.c:11

```
11 void deleteNode(struct Node** head, int key) {  
(gdb) print head->data  
Cannot access memory at address 0x8408b48f8458b48  
(gdb) print (*head)->next  
Cannot access memory at address 0x8408b48f8458b50  
(gdb) next  
12     struct Node* temp = *head, *prev;  
(gdb) next  
13     if (temp != NULL && temp->data == key) {  
(gdb) next  
18     while (temp->data != key) {
```

```

19         prev = temp;
(gdb) print temp->data
$1 = 1
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) print temp->data
$2 = 2
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next
19         prev = temp;
(gdb) next
20         temp = temp->next;
(gdb) next
18         while (temp->data != key) {
(gdb) next

```

```

Program received signal SIGSEGV, Segmentation fault.
0x000055555555520e in deleteNode (head=0x7fffffffda0, key=6) at linkedlist.c:18
18         while (temp->data != key) {
(gdb) next

```

```

Program terminated with signal SIGSEGV, Segmentation fault.
The program no longer exists.
(gdb) continue
The program is not being run.
(gdb) █

```

```
(base) student@a1-HP-ProDesk-600-G4-MT:~/Desktop$ "gdb linkedlist.c"
gdb linkedlist.c: command not found
(base) student@a1-HP-ProDesk-600-G4-MT:~/Desktop$ gdb linkedlist.c
GNU gdb (Ubuntu 9.2-0ubuntu1-20.04.1) 9.2
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Type "show copying" and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
"/home/student/Desktop/linkedlist.c": not in executable format: file format not recognized
(gdb) break 5
No symbol table is loaded. Use the "file" command.
(gdb) break main
No symbol table is loaded. Use the "file" command.
Make breakpoint pending on future shared library load? (y or [n]) n
(gdb) break deleteNode
No symbol table is loaded. Use the "file" command.
Make breakpoint pending on future shared library load? (y or [n]) n
(gdb) list
No symbol table is loaded. Use the "file" command.
(gdb) ./a.out
Undefined command: ".". Try "help".
(gdb) /a.out
Undefined command: "/". Try "help".
(gdb) a
Ambiguous command "a": actions, add-auto-load-safe-path, add-auto-load-scripts-directory, add-inferior...
(gdb) run
Starting program:
No executable file specified.
Use the "file" or "exec-file" command.
(gdb) quit
(base) student@a1-HP-ProDesk-600-G4-MT:~/Desktop$ gcc linkedlist.c
(base) student@a1-HP-ProDesk-600-G4-MT:~/Desktop$ gcc -g linkedlist.c
(base) student@a1-HP-ProDesk-600-G4-MT:~/Desktop$ gdb ./a.out
GNU gdb (Ubuntu 9.2-0ubuntu1-20.04.1) 9.2
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
```