



Bahir Dar University

Faculty of Computing

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OSSP Individual Assignment

System Call Implementation

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Section – A

System Call – recvfrom()

Submitted To: Lecturer Wondimu B.

recvfrom() system call

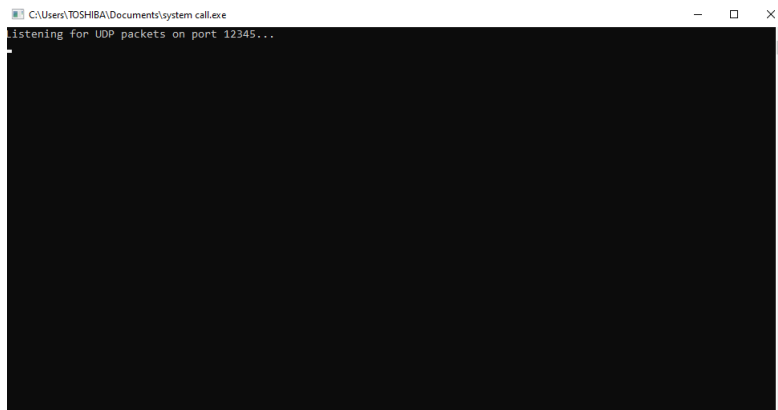
A system call is a way for a user-space program to request a low-level service from the operating system's kernel.

The `recvfrom()` system call is primarily used to receive data over a network using sockets, particularly with UDP, which is a connectionless protocol.

When a program wants to communicate with another, it creates a socket and associates it with the other program's socket.

In addition to receiving data, `recvfrom()` also provides the sender's address information—such as their IP address and port number—making it useful for identifying the source of the message.

Since the OpenVms operating system did not install I performed the system call on a windows operating system. After running the system call, the following initial output was generated.



```
C:\Users\TOSHIBA\Documents\system call.exe
listening for UDP packets on port 12345...

```

To test the call, the command `echo "Hello World" | ncat -u 127.0.0.1 12345` was executed in the command prompt. This command's purpose is to send the text 'Hello World' as a UDP packet to the local computer (127.0.0.1) via port 12345.

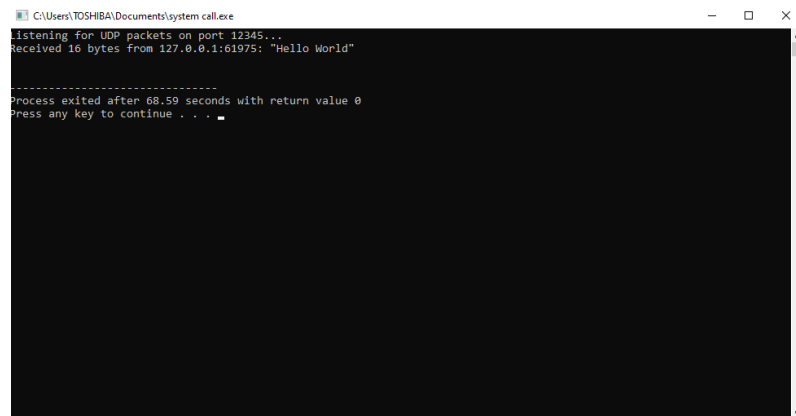


```
Command Prompt
Microsoft Windows [Version 10.0.19045.5737]
(c) Microsoft Corporation. All rights reserved.

.:Users\TOSHIBA>echo "Hello World" | ncat -u 127.0.0.1 12345
.:Users\TOSHIBA>D
Hello World

```

The sent message is then expected to appear in the compiler's output.



```
C:\Users\TOSHIBA\Documents\system call.exe
Listening for UDP packets on port 12345...
Received 16 bytes from 127.0.0.1:61975: "Hello World"

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Process exited after 68.59 seconds with return value 0
Press any key to continue . . .
```