Kabeer Ahmed [SE-19028]

Shell Program

Code:

```c
#include<stdio.h>

#include<unistd.h>

#include<sys/types.h>

#include<string.h>

#include<stdlib.h>


void main(void){
  while(1){
   printf("\nTry This Shell >>> ");


   char inputStr[20];
   fgets(inputStr, sizeof(inputStr), stdin);
   char* part = strtok(inputStr," ");
   int index = 1;
   char* args[20];
   char* cmd;
   cmd = part;
   args[0] = part;
   if (strcmp(cmd,"Quit\n") == 0 || strcmp(cmd,"\n") == 0){
     break;
   }

   while(part != NULL) {
      part = strtok(NULL," ");
```

```
      args[index] = part;

      index = index + 1;

   }


   int child = fork();

   if (child <= 0) {

     char path[100];

     strcpy(path, "/bin/");

     strcat(path, cmd);

     args[index - 2] = strtok(args[index - 2], "\n");

     execvp(cmd, args);

     printf(" Error! ");

     break;

   }

   else{

     wait(&child);

   }

 }

}
```

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Screenshots:

```
  GNU nano 5.4
#include<stdio.h>
#include<unistd.h>
#include<sys/types.h>
#include<string.h>
#include<stdlib.h>

void main(void){
  while(1){
    printf("Try This Shell >>> ");

    char inputStr[20];
    fgets(inputStr, sizeof(inputStr), stdin);
    char* part = strtok(inputStr," ");
    int index = 1;
    char* args[20];
    char* cmd;
    cmd = part;
    args[0] = part;
    if (strcmp(cmd,"Quit\n") == 0 || strcmp(cmd,"\n") == 0){
      break;
    }

    while(part != NULL) {
        part = strtok(NULL," ");
        args[index] = part;
        index = index + 1;
    }

    int child = fork();
    if (child <= 0) {
      char path[100];
      strcpy(path, "/bin/");
      strcat(path, cmd);
      args[index - 2] = strtok(args[index - 2], "\n");
      execvp(cmd, args);
      printf(" Error! ");
      break;
    }
    else{
      wait(&child);
    }
  }
}
```

```
File  Actions  Edit  View  Help                                    kali@kali: ~/uniwork

┌──(kali㉿kali)-[~/uniwork]
└─$ nano shellcode.c

┌──(kali㉿kali)-[~/uniwork]
└─$ gcc shellcode.c -o shell.out
shellcode.c: In function 'main':
shellcode.c:40:7: warning: implicit declaration of function 'wait' [-Wimplicit-function-declaration]
   40 |       wait(&child);
      |       ^~~~

┌──(kali㉿kali)-[~/uniwork]
└─$ ./shell.out

Try This Shell >>> ls -a
.   ..   shellcode.c   shell.out

Try This Shell >>> cd work
 Error!
Try This Shell >>> pwd
/home/kali/uniwork

Try This Shell >>> Quit

┌──(kali㉿kali)-[~/uniwork]
└─$ █
```