Operating Systems
Lab-3

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Task-1

```c
#include <stdio.h>
#include <unistd.h>

int main() {
    pid_t pid = fork();

    if (pid == 0) {
        // Child process
        printf("Welcome to Operating Systems Lab\n");
    } else if (pid > 0) {
        // Parent process
        printf("Welcome to Operating Systems Lab\n");
    } else {
        // Fork failed
        printf("Fork failed\n");
    }

    return 0;
}
```

```
/tmp/bLlss7ODda.o
Welcome to Operating Systems Lab
Welcome to Operating Systems Lab


=== Code Execution Successful ===
```

Task-2

```c
#include <stdio.h>
#include <unistd.h>

int main() {
    for (int i = 0; i < 5; i++) {
        fork();
    }
    printf("Process created\n");
    return 0;
}
```

```
Output
/tmp/drTOWybrYx.o
Process created
Process created
Process created
Process created
Process created


=== Code Execution Successful ===
```

Final Task-1

```c
#include <stdio.h>
#include <unistd.h>

int main() {
    pid_t pid = fork();

    if (pid == 0) {
        // Child process
        for (int i = 1; i <= 10; i++) {
            printf("Child: %d\n", i);
        }
    } else if (pid > 0) {
        // Parent process
        for (int i = 1; i <= 10; i++) {
            printf("Parent: %d\n", i);
        }
    } else {
```

```c
        // Fork failed
        printf("Fork failed\n");
    }

    return 0;
}
```

```
/ tmp/perYEwz8v3.o
Parent:  1
Parent:  2
Parent:  3
Parent:  4
Parent:  5
Parent:  6
Parent:  7
Parent:  8
Parent:  9
Parent:  10
Child:  1
Child:  2
Child:  3
Child:  4
Child:  5
Child:  6
Child:  7
Child:  8
Child:  9
Child:  10


=== Code Execution Successful ===
```

Final Task 2-

```c
#include <stdio.h>
#include <dirent.h>

void listFiles(const char *path) {
    struct dirent *entry;
    DIR *dp = opendir(path);

    if (dp == NULL) {
        perror("opendir");
        return;
    }
```

```c
    while ((entry = readdir(dp))) {
        printf("%s\n", entry->d_name);
    }

    closedir(dp);
}

int main() {
    const char *path = "."; // Change this to the desired directory path
    listFiles(path);
    return 0;
}
```

```
/tmp/BIAXN4wYGX.o
.bash_logout
.
.bashrc
.profile
..


=== Code Execution Successful ===
```