***1. sample program***

#include <pthread.h>

#include <stdio.h>

#include <stdlib.h>

#define NUM\_THREADS 5

void \*PrintHello(void \*threadid)

{

long tid;

tid = (long)threadid;

printf("Hello World! It's me, thread #%ld!\n", tid);

pthread\_exit(NULL);

}

int main(int argc, char \*argv[])

{

pthread\_t threads[NUM\_THREADS];

int rc;

long t;

for(t=0;t<NUM\_THREADS;t++) {

printf("In main: creating thread %ld\n", t);

rc = pthread\_create(&threads[t], NULL, PrintHello, (void \*)t );

if (rc) {

printf("ERROR; return code from pthread\_create() is %d\n", rc);

exit(-1);

}

}

pthread\_exit(NULL);

}

***Output:***

In main: creating thread 0

In main: creating thread 1

Hello World! It's me, thread #0!

Hello World! It's me, thread #1!

In main: creating thread 2

In main: creating thread 3

Hello World! It's me, thread #2!

In main: creating thread 4

Hello World! It's me, thread #3!

Hello World! It's me, thread #4!

**2.sample thread program by passing array**

#include <pthread.h>

#include <stdio.h>

#include <stdlib.h>

#define NUM\_THREADS 8

char \*messages[NUM\_THREADS];

void \*PrintHello(void \*threadid)

{

int \*id\_ptr, taskid;

sleep(1);

id\_ptr = (int \*) threadid;

taskid = \*id\_ptr;

printf("Thread %d: %s\n", taskid, messages[taskid]);

pthread\_exit(NULL);

}

int main(int argc, char \*argv[])

{

pthread\_t threads[NUM\_THREADS];

int \*taskids[NUM\_THREADS];

int rc, t;

messages[0] = "English: Hello World!";

messages[1] = "French: Bonjour, le monde!";

messages[2] = "Spanish: Hola al mundo";

messages[3] = "Klingon: Nuq neH!";

messages[4] = "German: Guten Tag, Welt!";

messages[5] = "Russian: Zdravstvytye, mir!";

messages[6] = "Japan: Sekai e konnichiwa!";

messages[7] = "Latin: Orbis, te saluto!";

for(t=0;t<NUM\_THREADS;t++) { taskids[t] = (int \*) malloc(sizeof(int));

\*taskids[t] = t;

printf("Creating thread %d\n", t);

rc = pthread\_create(&threads[t], NULL, PrintHello, (void \*) taskids[t] );

if (rc) {

printf("ERROR; return code from pthread\_create() is %d\n", rc);

exit(-1);

}

}

pthread\_exit(NULL);

}

**Output:**

[m\_prathilothamai@ssh ~]$ ./a.out

Creating thread 0

Creating thread 1

Creating thread 2

Creating thread 3

Creating thread 4

Creating thread 5

Creating thread 6

Creating thread 7

Thread 0: English: Hello World!

Thread 3: Klingon: Nuq neH!

Thread 1: French: Bonjour, le monde!

Thread 4: German: Guten Tag, Welt!

Thread 2: Spanish: Hola al mundo

Thread 6: Japan: Sekai e konnichiwa!

Thread 5: Russian: Zdravstvytye, mir!

Thread 7: Latin: Orbis, te saluto!