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Lab-Excercise: 4 (Thread Manipulation)

## Q1. Ans. The required c program is given as:

```
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<pthread.h>
pthread t ntid;
void printids(const char *s){
      pid t pid;
      pthread t tid;
      pid = getpid();
      tid = pthread self();
      printf("%s pid %u tid %u (0x%x)\n",s,pid,tid,tid);
}
void *thr fn(void *arg){
      printids("New Thread: ");
      return ((void *)0);
}
void main(){
      int err:
      err = pthread create(&ntid,NULL,thr fn,NULL);
      if(err !=0){
            printf("Error");
      printids("Main Thread: ");
      sleep(1);
      exit(0);
}
```

## **Output:**

```
student4@AB1205BSCS031:~/Desktop/21BCE1288$ ./a.out
Main Thread: pid 4272 tid 2118825792 (0x7e4ab740)
New Thread: pid 4272 tid 2118821632 (0x7e4aa700)
student4@AB1205BSCS031:~/Desktop/21BCE1288$
```

## Q2. Ans. The required c program is given as:

```
#include<stdio.h>
#include<unistd.h>
#include<pthread.h>
#include<stdlib.h>

pthread_t tid1,tid2,tid3;

void *hi(void *arg){
   int i;
```

```
for(i=1;i<=100;i++){
     printf("hi\t");
  printf("\n");
  return ((void *)0);
}
void *hello(void *arg){
  int j;
  for(j=1;j<=100;j++){
     printf("he \t");
  }
  printf("\n");
  return ((void *)0);
void main(){
  int err;
  err = pthread create(&tid1,NULL,hi,NULL);
  if(err != 0){
     printf("Error");
  err = pthread create(&tid2,NULL,hello,NULL);
  if(err != 0){
     printf("Error");
  }
  pthread join(tid1,NULL);
  pthread join(tid2,NULL);
  exit(0);
}
```

## **Output:**

.....