```c
/* *****sum of integers upto that number
#include<pthread.h>
#include<stdio.h>

int sum;
void *runner(void *param);

int main(int argc,char* argv[]){
    pthread_t tid;
    pthread_attr_t attr;

    if(argc!=2){
        fprintf(stderr,"usage : a.out <integer value>\n");
        return -1;
    }
    if(atoi(argv[1]) < 0){
        fprintf(stderr,"%d must be >=0\n",atoi(argv[1]));
        return -1;
    }
    pthread_attr_init(&attr);
    pthread_create(&tid,&attr,runner,argv[1]);
    pthread_join(tid,NULL);
    printf("Sum = %d\n",sum);
}

void *runner(void *param){
    int i,upper=atoi(param);
    sum=0;
    for(i=1;i<=upper;i++){
        sum+=i;
    }
    pthread_exit(0);
}*/




//sum upto integers using 2 threads ex. 500 given  ..
//thread 1 : sum 1 to 250  thread 2: sum 251 to 500
#include<pthread.h>
#include<stdio.h>
#include<stdlib.h>
#include<sys/types.h>
#include<sys/syscall.h>
#include<linux/unistd.h>

int sum;
void *runner(void *param);
int main(int argc,char* argv[]){
    pthread_t tid1;
    pthread_t tid2;
    pthread_attr_t attr1,attr2;

    if(argc!=2){
        fprintf(stderr,"usage : a.out <integer value>\n");
        return -1;
    }
    if(atoi(argv[1]) < 0){
        fprintf(stderr,"%d must be >=0\n",atoi(argv[1]));
        return -1;
    }

    pthread_attr_init(&attr1);
    pthread_create(&tid1,&attr1,runner,argv[1]);
    printf("1111\n");
```

```c
        //printf("Thread id1=%d\n",gettid());
        pthread_join(tid1,NULL);
        printf("2222\n");
        printf("Thread id1=%ld\n",pthread_self());

        pthread_attr_init(&attr2);
        pthread_create(&tid2,&attr2,runner,argv[1]);
        printf("3333\n");
        //printf("Thread id2=%d\n",gettid());
        pthread_join(tid2,NULL);
        printf("4444\n");
        printf("Thread id2=%ld\n",pthread_self());

        printf("Sum = %d\n",sum);
}

void *runner(void *param){
        int i,upper1=(atoi(param))/2;
        int j,upper2=atoi(param);
        if(sum==0){
            for(i=1;i<=upper1;i++){
                sum+=i;
            }
            printf("sum1=%d\n",sum);
            printf("Thread id3=%d\n",syscall(__NR_gettid));
        }


        else{
            for(j=upper1+1;j<=upper2;j++){
                sum+=j;
            }
            printf("sum2=%d\n",sum);
            printf("Thread id4=%ld\n",syscall(__NR_gettid));
        }

        pthread_exit(0);
}
```