

Operating System – Lab 18

Task 1: Write a C++ code using pthread library that performs the following actions:
Take two integer a and b inputs from User. Create four threads:

- 1st thread will calculate their sum
- 2nd thread will calculate their difference
- 3rd thread will calculate their product
- 4th thread will give their squares

Sum, difference, product, squares should be displayed in main method

Hint: Use Global declaration of variables for access.

Code:

```
s21-ds-maimoona@tamleek-vm: ~  
#include<iostream>  
#include<pthread.h>  
  
using namespace std;  
void *runner(void *param){  
    long i = (long)param;  
  
    long x;  
    cout << "Type a number a = : ";  
    cin >> x;  
  
    long y;  
    cout << "Type a number b = : ";  
    cin >> y;  
    cout << "\nSum = " << x+y;  
    cout << "\nDifference = : " << x-y;  
  
    cout << "\nProduct = " << x*y;  
  
    cout << "\nSquare of a = : " << x*x;  
  
    cout << "\nSquare of b = " << y*y;  
  
    cout << "\n";  
    pthread_exit(NULL);  
}  
  
int main(){  
    long thread_nums = 5;  
    pthread_t tid;  
    pthread_create(&tid ,NULL , runner, (void *)thread_nums );  
  
    pthread_join(tid,NULL);  
}
```

```
s21-ds-maimoona@tamleek-vm:~$ g++ task1.cpp -o task1 -lpthread  
s21-ds-maimoona@tamleek-vm:~$ ./task1  
Type a number a = : 5  
Type a number b = : 2  
  
Sum = 7
```