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**Assignment # : CS604p ( 1 )**

**Question no 1:**

#include <stdio.h>

#include <pthread.h>

#include <string.h>

void\* calculate\_squares(void\* param) {

int\* arr = (int\*)param;

printf("\nIn First Thread\nPrinting the Actual Contents of Array\n");

for (int i = 0; i < 10; i++) {

printf("%d\n", arr[i]);

}

printf("\nPrinting the squares of Numbers in the Array\n");

for (int i = 0; i < 10; i++) {

printf("%d\n", arr[i] \* arr[i]);

}

printf("\n");

return NULL;

}

void\* reverse\_string(void\* param) {

char\* str = (char\*)param;

int len = strlen(str);

char reversed[len + 1];

for (int i = 0; i < len; i++) {

reversed[i] = str[len - i - 1];

}

reversed[len] = '\0';

printf("\nIn Second Thread, Printing the Reverse String...\n%s\n", reversed);

return NULL;

}

int main() {

pthread\_t t1, t2;

int array[10] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};

char str[100];

printf("Enter a String To Pass T2: ");

scanf("%99s", str);

if (pthread\_create(&t2, NULL, reverse\_string, (void\*)str) != 0) {

perror("Failed to Create Thread T2");

return 1;

}

if (pthread\_create(&t1, NULL, calculate\_squares, (void\*)array) != 0) {

perror("Failed to Create Thread T1");

return 1;

}

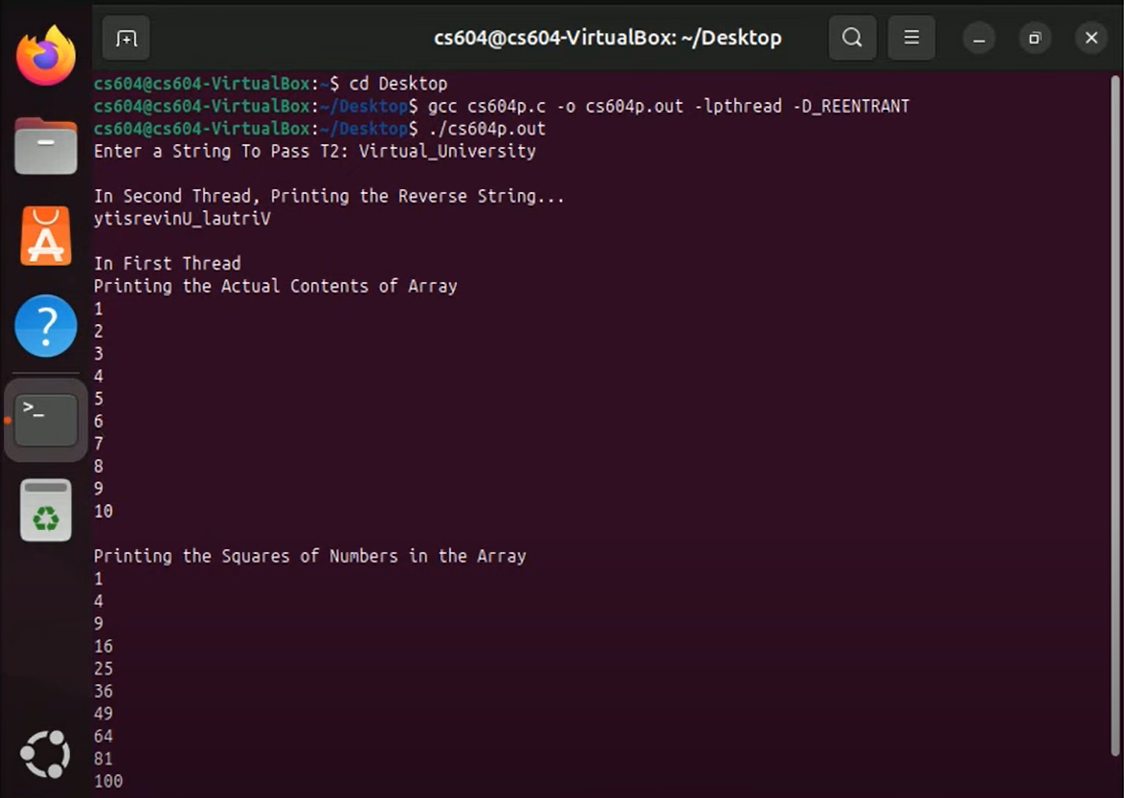
pthread\_join(t2, NULL);

pthread\_join(t1, NULL);

return 0;

}

**Output:**

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The End