**EXPERIMENT: 18** To Construct a C program to simulate producer-consumer problem using semaphores

**PROGRAM:**

#include <stdio.h>

#define SIZE 5

int main() {

int buffer[SIZE], in = 0, out = 0;

int item;

// Simulate producing 5 items

for (item = 1; item <= 5; item++) {

// Producer puts item

buffer[in] = item;

printf("Producer produced: %d\n", item);

in = (in + 1) % SIZE;

// Consumer takes item

int consumed = buffer[out];

printf("Consumer consumed: %d\n", consumed);

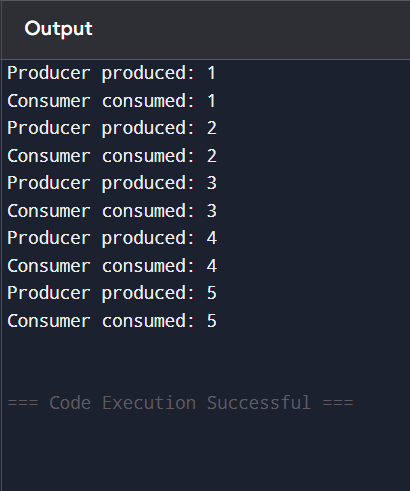
out = (out + 1) % SIZE;

}

return 0;

}

**OUTPUT:**

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