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#include <stdio.h>
#include <stdlib.h>

int mutex = 1;
int full = 0;
int empty = 10;
int buffer[10];
int in = 0, out = 0;

int wait(int s) {
    return --s;
}

int signal(int s) {
    return ++s;
}

void produce(int value) {
    mutex = wait(mutex);
    empty = wait(empty);

    buffer[in] = value;
    in = (in + 1) % 10;

    full = signal(full);
    mutex = signal(mutex);
}

void consume() {
    mutex = wait(mutex);
    full = wait(full);

    int value = buffer[out];
    out = (out + 1) % 10;

    empty = signal(empty);
    mutex = signal(mutex);

    printf("The value consumed is : %d\n", value);
}

int main() {
    int choice, value;

    while (1) {
        printf("\n1.Produce 2.Consume 3.Exit\n");
        printf("Enter your choice : ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                if (empty == 0) {
                    printf("Buffer is FULL! Cannot produce.\n");
                } else {
                    printf("Enter the value : ");
                    scanf("%d", &value);
                    produce(value);
                }
                break;

            case 2:
                if (full == 0) {
                    printf("Buffer is EMPTY! Cannot consume.\n");
                } else {
                    consume();
                }
            }
        }
    }
}
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        break;

    case 3:
        printf("Exiting...\n");
        exit(0);

    default:
        printf("Invalid choice!\n");
    }
}

return 0;
}
```