

```
Output
Public values: a = 5, q = 23
Alice sends: 8
Bob sends: 19
Shared secret key computed by Alice: 2
Shared secret key computed by Bob: 2
```

The screenshot displays a web browser window with the URL `programiz.com/c-programming/online-compiler/`. The page title is "Programiz C Online Compiler". The code in the editor is as follows:

```
main.c
8     if (exp % 2 == 1)
9         result = (result * base) % mod;
10    exp = exp >> 1;
11    base = (base * base) % mod;
12 }
13 return result;
14 }
15 int main() {
16     int q = 23;
17     int a = 5;
18     int x = 6;
19     int y = 15;
20     int A = modExp(a, x, q);
21     int B = modExp(a, y, q);
22     int K_alice = modExp(B, x, q);
23     int K_bob = modExp(A, y, q);
24     printf("Public values: a = %d, q = %d\n", a, q);
25     printf("Alice sends: %d\n", A);
26     printf("Bob sends: %d\n", B);
27     printf("Shared secret key computed by Alice: %d\n", K_alice);
28     printf("Shared secret key computed by Bob: %d\n", K_bob);
29     return 0;
30 }
31
```

The output of the program is:

```
Public values: a = 5, q = 23
Alice sends: 8
Bob sends: 19
Shared secret key computed by Alice: 2
Shared secret key computed by Bob: 2

=== Code Execution Successful ===
```