

INTEGER RESTORING:

```
#include <stdio.h>
```

```
#include <string.h>
```

```
#define N 8
```

```
void restoring_division(int dividend[], int divisor[], int quotient[]) {
```

```
    int partial_remainder[N+1];
```

```
    int borrow = 0;
```

```
    memset(partial_remainder, 0, sizeof(partial_remainder));
```

```
    for (int i = 0; i < N; i++) {
```

```
        for (int j = N; j > 0; j--)
```

```
            partial_remainder[j] = partial_remainder[j - 1];
```

```
        partial_remainder[0] = dividend[i];
```

```
        for (int j = 0; j < N+1; j++) {
```

```
            partial_remainder[j] -= divisor[j];
```

```
            if (partial_remainder[j] < 0) {
```

```
                partial_remainder[j] += 2;
```

```
                partial_remainder[j+1] -= 1;
```

```
            }
```

```
        }
```

```
        quotient[i] = (partial_remainder[0] >= 0) ? 1 : 0;
```

```
        if (partial_remainder[0] < 0) {
```

```
            for (int j = 0; j < N+1; j++) {
```

```
                partial_remainder[j] += divisor[j];
```

```
            }
```

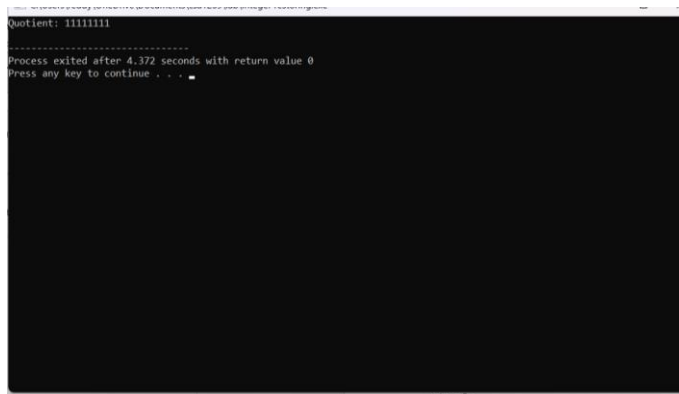
```
        }
```

```
    }
```

```
}
```

```
int main() {  
  
    int dividend[N] = {1, 1, 0, 1, 0, 1, 0, 1}; // Binary representation of dividend (example)  
    int divisor[N] = {1, 0, 1, 1, 0, 0, 1, 0}; // Binary representation of divisor (example)  
    int quotient[N]; // Quotient will be of the same size as the dividend  
    restoring_division(dividend, divisor, quotient);  
    printf("Quotient: ");  
    for (int i = 0; i < N; i++) {  
        printf("%d", quotient[i]);  
    }  
    printf("\n");  
  
    return 0;  
}
```

Output:



The screenshot shows a terminal window with a black background and white text. The first line of output is "Quotient: 11111111". Below this, there is a dashed line separator. The next line of text is "Process exited after 4.372 seconds with return value 0". The final line of text is "Press any key to continue . . .", followed by a small cursor icon. At the bottom of the terminal window, the text "return 0;" is visible.