**package** com;

**public** **class** RangeQueriesProgramme {

**static** **int** *a* = 8;

**static** **int** *Num* = 500;

**static** **long** *table*[][] = **new** **long**[*Num*][*a* + 1];

**static** **void** buildSparseTable(**int** arr[], **int** num)

{

**for** (**int** i = 0; i < num; i++)

*table*[i][0] = arr[i];

**for** (**int** j = 1; j <= *a*; j++)

**for** (**int** i = 0; i <= num - (1 << j); i++)

*table*[i][j] = *table*[i][j - 1] + *table*[i + (1 << (j - 1))][j - 1];

}

**static** **long** query(**int** L, **int** R)

{

**long** answer = 0;

**for** (**int** j = *a*; j >= 0; j--)

{

**if** (L + (1 << j) - 1 <= R)

{

answer = answer + *table*[L][j];

L += 1 << j;

}

}

**return** answer;

}

**public** **static** **void** main(String args[])

{

**int** arr[] = { 8,7,5,31,20,8,3 };

**int** n = arr.length;

*buildSparseTable*(arr, n);

System.***out***.println(*query*(2,5));

System.***out***.println(*query*(0,6));

System.***out***.println(*query*(4,6));

}

}

