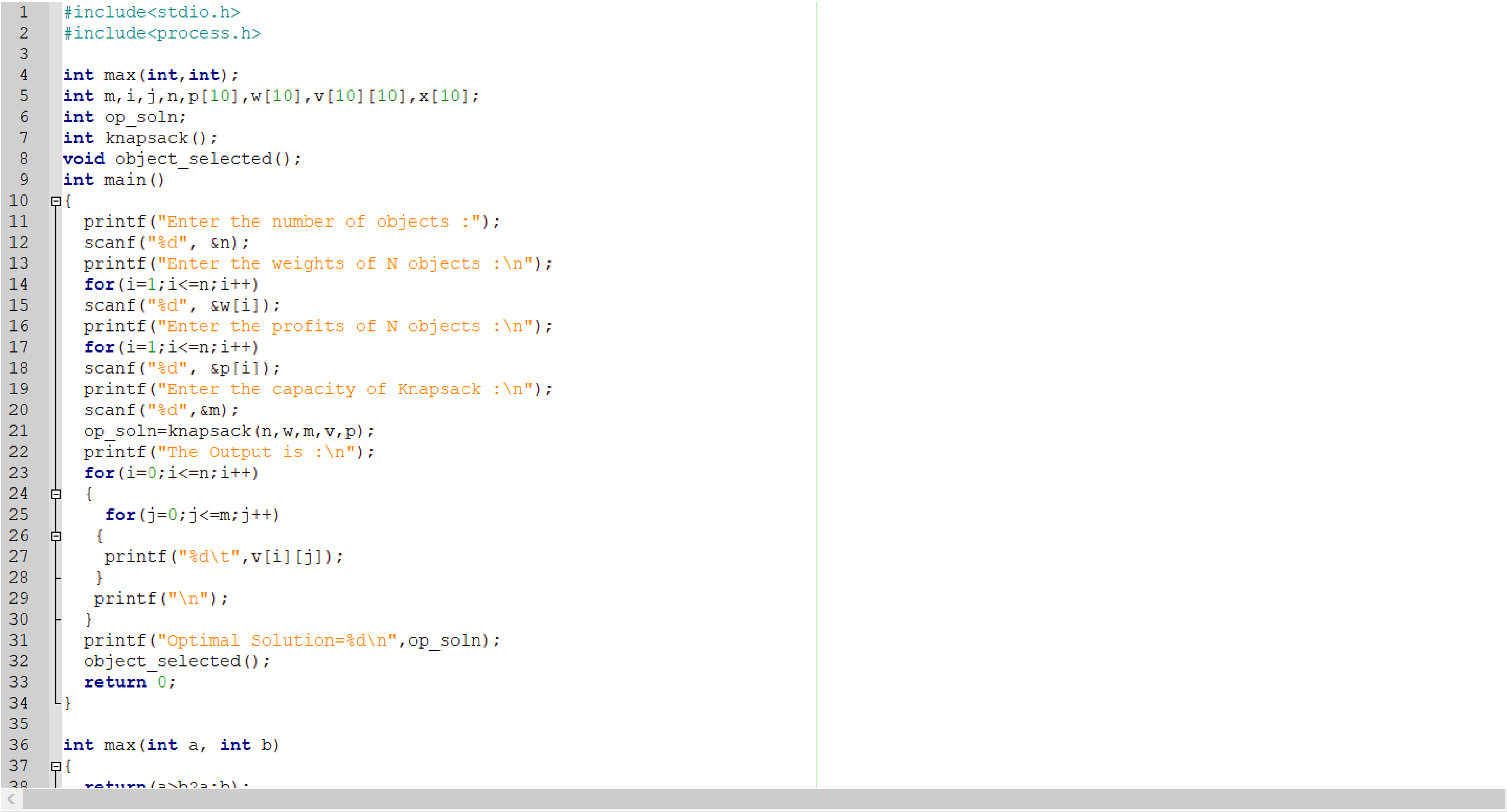
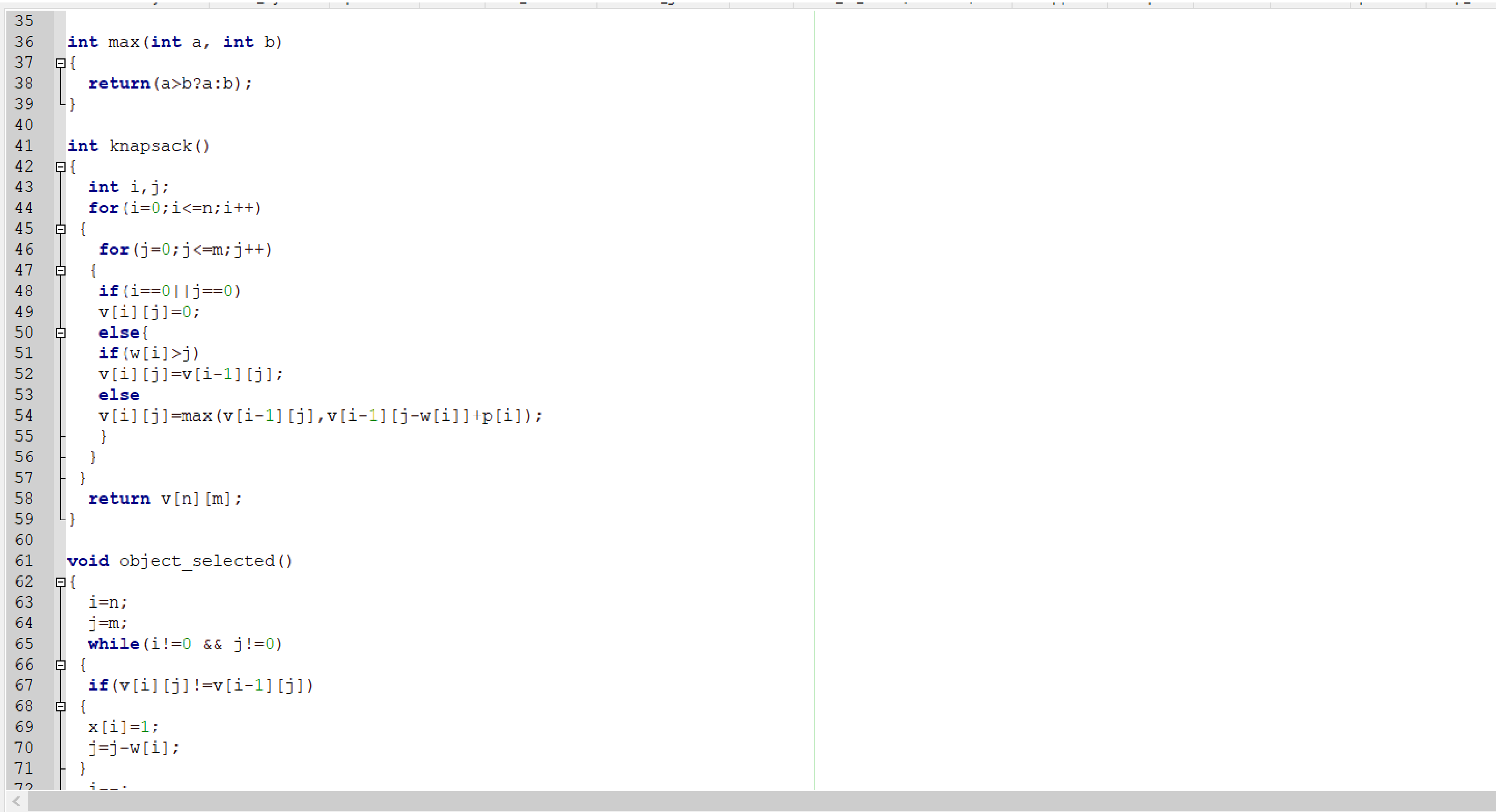
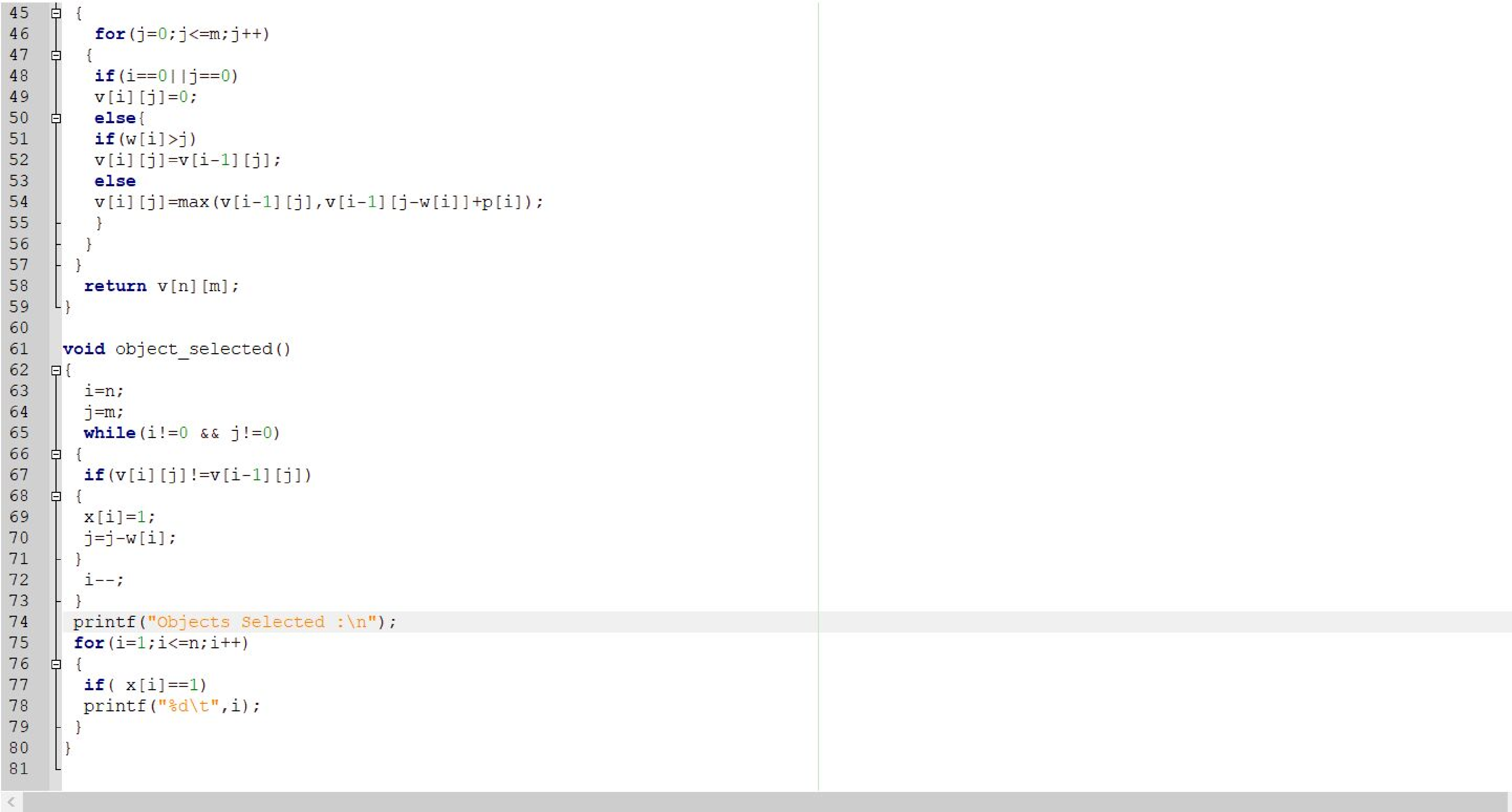


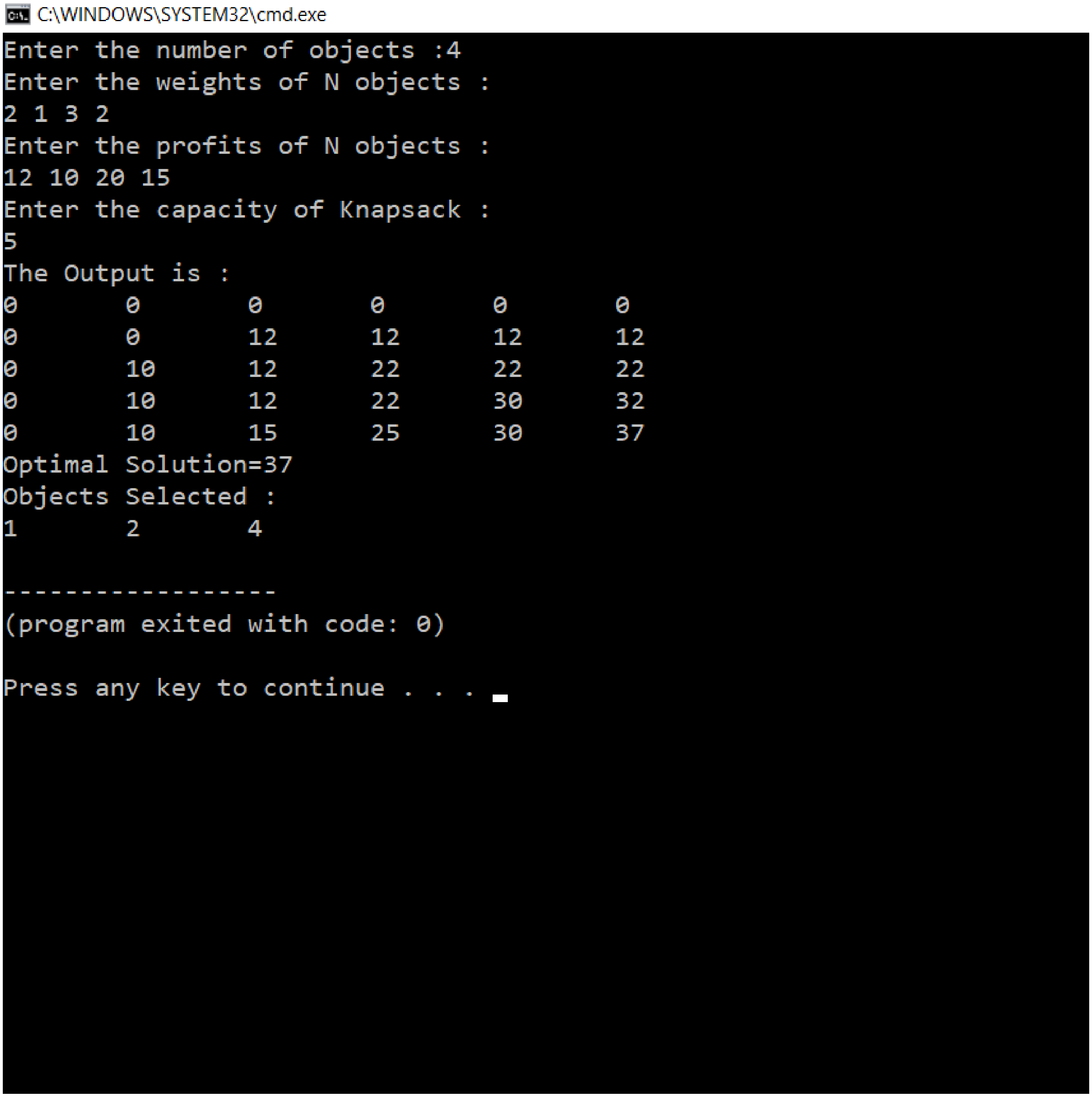
```c
#include<stdio.h>
#include<process.h>

int max(int,int);
int m,i,j,n,p[10],w[10],v[10][10],x[10];
int op_soln;
int knapsack();
void object_selected();
int main()
{
  printf("Enter the number of objects :");
  scanf("%d", &n);
  printf("Enter the weights of N objects :\n");
  for(i=1;i<=n;i++)
  scanf("%d", &w[i]);
  printf("Enter the profits of N objects :\n");
  for(i=1;i<=n;i++)
  scanf("%d", &p[i]);
  printf("Enter the capacity of Knapsack :\n");
  scanf("%d",&m);
  op_soln=knapsack(n,w,m,v,p);
  printf("The Output is :\n");
  for(i=0;i<=n;i++)
  {
    for(j=0;j<=m;j++)
   {
    printf("%d\t",v[i][j]);
   }
   printf("\n");
  }
  printf("Optimal Solution=%d\n",op_soln);
  object_selected();
  return 0;
}

int max(int a, int b)
{
  return(a>b?a:b);
```



```
int max(int a, int b)
{
  return(a>b?a:b);
}

int knapsack()
{
  int i,j;
  for(i=0;i<=n;i++)
 {
   for(j=0;j<=m;j++)
  {
   if(i==0||j==0)
   v[i][j]=0;
   else{
   if(w[i]>j)
   v[i][j]=v[i-1][j];
   else
   v[i][j]=max(v[i-1][j],v[i-1][j-w[i]]+p[i]);
   }
  }
 }
  return v[n][m];
}

void object_selected()
{
  i=n;
  j=m;
  while(i!=0 && j!=0)
 {
  if(v[i][j]!=v[i-1][j])
 {
  x[i]=1;
  j=j-w[i];
 }
  i--;
```



```
 {
   for(j=0;j<=m;j++)
  {
   if(i==0||j==0)
   v[i][j]=0;
   else{
   if(w[i]>j)
   v[i][j]=v[i-1][j];
   else
   v[i][j]=max(v[i-1][j],v[i-1][j-w[i]]+p[i]);
   }
  }
 }
  return v[n][m];
}

void object_selected()
{
  i=n;
  j=m;
  while(i!=0 && j!=0)
 {
  if(v[i][j]!=v[i-1][j])
 {
  x[i]=1;
  j=j-w[i];
 }
  i--;
 }
 printf("Objects Selected :\n");
 for(i=1;i<=n;i++)
 {
  if( x[i]==1)
  printf("%d\t",i);
 }
}
```



```
Enter the number of objects :4
Enter the weights of N objects :
2 1 3 2
Enter the profits of N objects :
12 10 20 15
Enter the capacity of Knapsack :
5
The Output is :
0       0       0       0       0       0
0       0       12      12      12      12
0       10      12      22      22      22
0       10      12      22      30      32
0       10      15      25      30      37
Optimal Solution=37
Objects Selected :
1       2       4

------------------
(program exited with code: 0)

Press any key to continue . . .
```