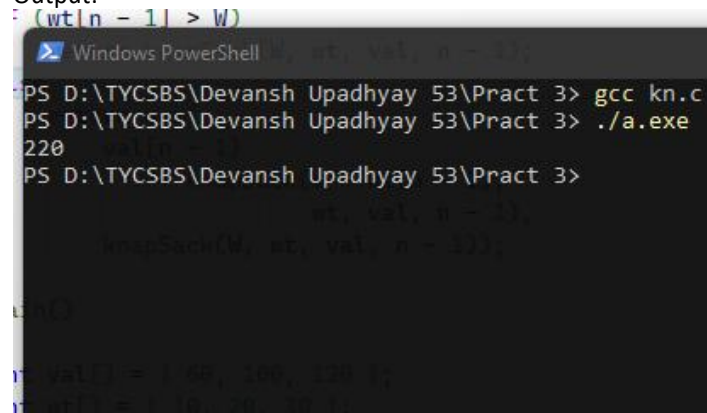


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Roll No 53

### Program Code:

```
1  #include <stdio.h>
2  int max(int a, int b) { return (a > b) ? a : b; }
3  int knapSack(int W, int wt[], int val[], int n)
4  {
5      // Base Case
6      if (n == 0 || W == 0)
7          return 0;
8      if (wt[n - 1] > W)
9          return knapSack(W, wt, val, n - 1);
10     else
11         return max(
12             val[n - 1]
13             + knapSack(W - wt[n - 1],
14                       wt, val, n - 1),
15             knapSack(W, wt, val, n - 1));
16 }
17 int main()
18 {
19     int val[] = { 60, 100, 120 };
20     int wt[] = { 10, 20, 30 };
21     int W = 50;
22     int n = sizeof(val) / sizeof(val[0]);
23     printf("%d", knapSack(W, wt, val, n));
24     return 0;
25 }
```

### Output:



```
PS D:\TYCSBS\Devansh Upadhyay 53\Pract 3> gcc kn.c
PS D:\TYCSBS\Devansh Upadhyay 53\Pract 3> ./a.exe
220
PS D:\TYCSBS\Devansh Upadhyay 53\Pract 3>
```