Lab05: Arrays and Files

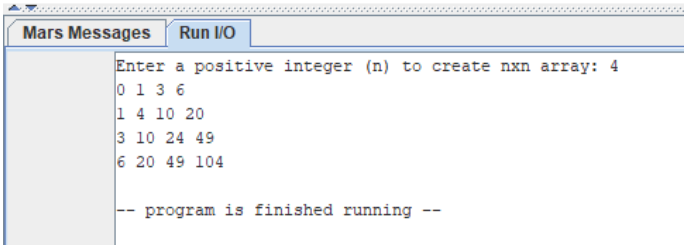
Note: You need to follow the printing style in the sample runs.

Task(s):

1. Write a MIPS program that allocates an n×n array of integers on the heap, where n is a user input. The program should compute and print the value of each element as follows:

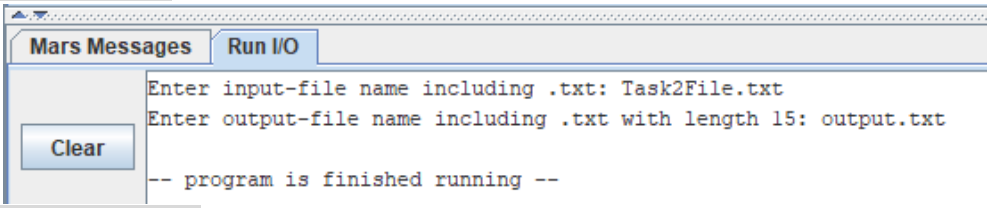
```
for (i=0; i<n; i++)
  for (j=0; j<n; j++) {
    a[i][j] = i+j;
    if (i>0) a[i][j] = a[i][j] + a[i-1][j];
    if (j>0) a[i][j] = a[i][j] + a[i][j-1];
    print_int(a[i][j]);
    print_char(' ');
  }
  print_char('\n');
}
```

SAMPLE RUN:



2. Write a MIPS program to copy an input text file into an output file. The input and output file names should be entered by the user. If the input file cannot be opened, print an error message.
   Note: assume the input file is **Task2File.txt** and it is attached with this file.

SAMPLE RUN:



IN and OUT files: