Shiv Nadar University <u>CSD101: Introduction to Computing and Programming</u> Lab #6 Loops, functions, arrays - 3

Max marks: 90 Due on/before:22.00, 25-Sep-2021.

- 1. The figure below shows 8 rows of what is often called Pascal's triangle though it was well known before his time.

Write a program to read a positive integer n and print out the first n rows of Pascal's triangle. Note that the coefficients are the binomial coefficients - that is $\binom{r}{0}, \binom{r}{1}, \ldots, \binom{r}{r}$ where r is the row number and the first row has r = 0 and we assume $\binom{0}{0} = \binom{1}{0} = 1$. Remember that $\binom{r}{k} = \frac{r!}{(r-k)!k!}$, where r! stands for factorial of r, and $\binom{r}{k} = \binom{r}{r-k}$.

2. Write a program to read in two dates d1 and d2 in the format dd mm yyyy and print out the number of days between the two dates. Assume that d1 is the earlier date and d2 the later date. If d1 and d2 are the same date then we count the number of days between them as 1 day. You should also handle leap years properly and check that both dates are legal. If either date is illegal the program should print out a suitable error message. [40]

[50]

2-Oct-2021