

DAY 6

Q237 Write a C program to test whether a user-inputted number is a palindrome number or not.

Q247 Write a C program to accept an integer and print the digits using words. (For example, if 123 is inputted, output will be One Two Three)

Q257 Write a C program to find out the permutation or arrangements of n different objects taking r items at a time $\left[nP_r = \frac{n!}{(n-r)!} \right]$

Q267 Write a C program to evaluate the sine series:

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots \infty$$

Q277 Write a C program to evaluate the sum of the series:

$1 + (1+2) + (1+2+3) + \dots + (1+2+\dots+N)$ for a given integer N .

Q287 Write a menu-driven C program to perform the following conversions of numbers:

- (i) Convert Binary to Decimal
- (ii) Convert Decimal to Binary
- (iii) Exit

Q297 Write a C program to generate and print the pyramid of numbers as follows:-


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      1
    2 3 2
  3 4 5 4 3
4 5 6 7 6 5 4
  
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⋮
n number of lines

Q 307 Write a C program to generate and print the following Pascal triangle:-

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      1
    1 1
  1 2 1
1 3 3 1
  1 4 6 4 1
    1 6 15 10 6 1
      1 7 21 35 35 21 7 1
    1 8 28 56 70 56 28 8 1
      1 9 36 84 126 126 84 36 9 1
    1 10 45 120 210 252 210 120 45 10 1
      1 11 55 165 330 462 462 330 165 55 11 1
    1 12 66 220 495 792 924 792 495 220 66 12 1
      1 13 78 286 715 1287 1716 1716 1287 715 286 78 13 1
    1 14 91 378 1001 2002 3003 3432 3003 2002 1001 378 91 14 1
      1 15 105 462 1365 3003 5005 6352 6352 5005 3003 1365 462 105 15 1
    1 16 120 560 1632 3771 6435 9008 10400 10400 9008 6435 3771 1632 560 120 16 1
      1 13 136 680 2080 4640 8008 11440 13000 11440 8008 4640 2080 680 136 13 1
    1 14 154 840 2730 6006 10815 16816 20349 20349 16816 10815 6006 2730 840 154 14 1
      1 15 165 1001 3432 8008 13640 21845 27455 27455 21845 13640 8008 3432 1001 165 15 1
    1 16 182 1287 4374 11022 21845 35271 46380 46380 35271 21845 11022 4374 1287 182 16 1
      1 17 198 1456 5005 12376 24310 40476 55440 63537 63537 55440 40476 24310 12376 5005 1456 198 17 1
    1 18 210 1716 6188 16797 35271 64350 101270 128700 128700 101270 64350 35271 16797 6188 1716 210 18 1
      1 21 231 1848 7140 18480 38760 71400 116280 154330 154330 116280 71400 38760 18480 7140 1848 231 21 1
    1 22 253 2184 8580 24310 52002 95284 145480 203490 233480 203490 145480 95284 52002 24310 8580 2184 253 22 1
      1 26 276 2431 10010 27455 60060 128700 243100 377100 463800 377100 243100 128700 60060 27455 10010 2431 276 26 1
    1 28 300 3003 12870 35271 80080 171600 330030 505200 635370 635370 505200 330030 171600 80080 35271 12870 3003 300 28 1
      1 33 330 3640 16380 43740 100100 218450 404760 714000 1012700 1287000 1012700 714000 404760 218450 100100 43740 16380 3640 330 33 1
    1 36 378 4620 21840 57080 130000 274550 505200 800800 1144000 1364000 1144000 800800 505200 274550 130000 57080 21840 4620 378 36 1
      1 42 462 5460 27450 71400 163800 352700 643500 1012700 1454800 1716000 1454800 1012700 643500 352700 163800 71400 27450 5460 462 42 1
    1 48 528 6720 35270 95280 233480 505200 900800 1364000 1944800 2334800 1944800 1364000 900800 505200 233480 95280 6720 528 48 1
      1 56 616 8580 43740 114400 274550 554400 952800 1543300 2184500 2542560 2184500 1543300 952800 554400 274550 114400 43740 8580 616 56 1
    1 63 714 10010 50050 130000 300300 600600 1012700 1681600 2431000 2982080 2431000 1681600 1012700 600600 300300 130000 50050 10010 714 63 1
      1 72 840 12870 64350 171600 404760 800800 1364000 2184500 3300300 4047600 3300300 2184500 1364000 800800 404760 171600 64350 12870 840 72 1
    1 84 1001 18480 100100 274550 643500 1287000 2184500 3527100 5052000 6353700 5052000 3527100 2184500 1287000 643500 274550 100100 18480 1001 84 84 1
      1 96 1200 20020 114400 300300 714000 1454800 2542560 4047600 6006000 7920000 7920000 6006000 4047600 2542560 1454800 714000 300300 114400 20020 1200 96 96 1
    1 108 1456 27450 136400 377100 900800 1716000 3003000 4638000 6435000 8008000 8008000 6435000 3003000 1716000 900800 377100 136400 27450 1456 108 108 1
      1 126 1716 33003 154330 404760 952800 2034900 3771000 6006000 8580000 11440000 11440000 8580000 6006000 3771000 2034900 952800 404760 154330 33003 1716 126 126 1
    1 144 2002 35271 163800 404760 952800 1944800 3300300 5052000 7140000 9528000 11440000 11440000 9528000 7140000 5052000 3300300 1944800 952800 404760 163800 35271 2002 144 144 1
      1 168 2431 46380 218450 554400 1287000 2542560 4374000 6720000 9008000 11440000 12870000 12870000 11440000 9008000 6720000 4374000 2542560 554400 218450 46380 2431 168 168 1
    1 192 2982 60060 274550 714000 1638000 3300300 5544000 8580000 12870000 17160000 20349000 20349000 17160000 12870000 8580000 5544000 3300300 1638000 714000 274550 60060 2982 192 192 1
      1 216 3640 80080 352700 952800 2184500 4374000 7920000 12870000 19448000 25425600 29820800 29820800 25425600 19448000 12870000 7920000 4374000 952800 352700 80080 3640 216 216 1
    1 240 4464 114400 300300 714000 1543300 2745500 4638000 7140000 10127000 13640000 16380000 16380000 13640000 10127000 7140000 4638000 2745500 714000 300300 114400 4464 240 240 1
      1 276 5610 163800 404760 1012700 2184500 4047600 7140000 11440000 16380000 21845000 25425600 25425600 21845000 16380000 11440000 7140000 4047600 1012700 2184500 404760 163800 5610 276 276 1
    1 312 7084 218450 554400 1287000 2745500 5052000 8008000 12870000 19448000 25425600 30030000 30030000 25425600 19448000 12870000 8008000 5052000 2745500 1287000 554400 7084 312 312 1
      1 360 9008 300300 792000 2034900 4638000 9008000 15433000 25425600 37710000 50520000 55440000 55440000 50520000 37710000 25425600 15433000 9008000 4638000 2034900 792000 300300 9008 360 360 1
    1 408 11440 1287000 3300300 8008000 17160000 33003000 55440000 85800000 128700000 163800000 184800000 184800000 163800000 128700000 85800000 55440000 33003000 8008000 3300300 1287000 11440 408 408 1
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    1 528 18480 3003000 7920000 20349000 46380000 85800000 145480000 233480000 330030000 404760000 437400000 437400000 404760000 330030000 233480000 145480000 85800000 46380000 20349000 7920000 3003000 18480 528 528 1
      1 594 23348 4047600 10127000 25425600 55440000 101270000 171600000 274550000 377100000 463800000 505200000 505200000 463800000 377100000 274550000 171600000 101270000 25425600 55440000 10127000 4047600 23348 594 594 1
    1 672 30030 5052000 13640000 33003000 71400000 128700000 218450000 330030000 437400000 505200000 554400000 554400000 505200000 437400000 330030000 218450000 128700000 71400000 33003000 13640000 5052000 30030 672 672 1
      1 756 38760 6435000 17160000 40476000 90080000 163800000 274550000 404760000 554400000 643500000 672000000 672000000 643500000 554400000 404760000 274550000 163800000 90080000 40476000 17160000 6435000 38760 756 756 1
    1 840 49600 8580000 21845000 50520000 114400000 218450000 377100000 554400000 672000000 756000000 792000000 792000000 756000000 672000000 554400000 377100000 218450000 114400000 50520000 21845000 8580000 49600 840 840 1
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