PHYSICS WALLA

PROBLEM ON CPP LOOPS-2

ASSIGNMENT SOLUTIONS

Q1 - Write a program to calculate the factorial of a number.

Output: -

Q2 - Write a program to print all Armstrong numbers between 100 to 500.

Output: -

Q3 - Write a program to find the sum of n natural numbers.

Output: -

Q4 - Write a program to reverse a given integer number.

Output: -

Q5 - Write a program to print the cross pattern given below (in the shape of X)

Output: -

Q6- Write a program to print alphabet diamond pattern

Output: -

```
Enter the size of the diamond: 17
                A
               BBB
              CCCCC
             DDDDDDD
            EEEEEEEEE
           FFFFFFFFFFF
          GGGGGGGGGGGGG
         HHHHHHHHHHHHHHH
        IIIIIIIIIIIIIIIII
       JJJJJJJJJJJJJJJJJJJ
      KKKKKKKKKKKKKKKKKKKKK
     LLLLLLLLLLLLLLLLLLLLLLL
    MMMMMMMMMMMMMMMMMMMMMMMMM
   NNNNNNNNNNNNNNNNNNNNNNNNNNN
  OOOOOOOOOOOOOOOOOOOOOOOOOOOOO
 PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
QQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQ
QQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQQ
 PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
  OOOOOOOOOOOOOOOOOOOOOOOOOOOOO
   NNNNNNNNNNNNNNNNNNNNNNNNNNN
    MMMMMMMMMMMMMMMMMMMMMMMMM
     LLLLLLLLLLLLLLLLLLLLLLL
      KKKKKKKKKKKKKKKKKKKKK
       JJJJJJJJJJJJJJJJJJJ
        IIIIIIIIIIIIIIIII
         HHHHHHHHHHHHHHH
          GGGGGGGGGGGGG
           FFFFFFFFFFF
            EEEEEEEEE
             DDDDDDD
              CCCCC
               BBB
                B
PS D:\VS Code\C++>
```

Q7- Write a program to print + pattern given below

Output: -

```
PS D:\VS Code> cd "d:\VS Code\C++\" ; if ($?) { g++ Loops7.cpp -o Loops7 } ; if ($?) { .\Loops7 }
Enter the size of the pattern: 17
        *
        *
        *
        *
        *
        *
        *
        *
        *
+++++++++++++++++
        *
        *
        *
        *
        *
        *
        *
        *
PS D:\VS Code\C++>
```

Q8 - Write a C++ program to print a triangle of prime numbers up to given number of lines of the triangle.

Output: -

```
PS D:\VS Code> cd "d:\VS Code\C++\" ; if ($?) { g++ Loops8.cpp -o Loops8 } ; if ($?) { .\Loops8 }
Please enter the no of lines 17
                  2
                3 5
              7 11 13
             17 19 23 29
            31 37 41 43 47
           53 59 61 67 71 73
          79 83 89 97 101 103 107
        109 113 127 131 137 139 149 151
       157 163 167 173 179 181 191 193 197
      199 211 223 227 229 233 239 241 251 257
     263 269 271 277 281 283 293 307 311 313 317
    331 337 347 349 353 359 367 373 379 383 389 397
   401 409 419 421 431 433 439 443 449 457 461 463 467
  479 487 491 499 503 509 521 523 541 547 557 563 569 571
 577 587 593 599 601 607 613 617 619 631 641 643 647 653 659
661 673 677 683 691 701 709 719 727 733 739 743 751 757 761 769
773 787 797 809 811 821 823 827 829 839 853 857 859 863 877 881 883
```

Q9- Write a C++ program to check whether a Number can be expressed as a Sum of Two Prime Numbers.

Output: -

Q10- Write a C++ program to print a rectangle out of *

Output: -

THANK YOU MA'AM

AND

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