

## Assignment Lec (3)

- (1) Write a program that reads a positive integer and checks if it is a prime number.
- (2) Write a program to display English alphabets from A to Z.
- (3) Write a program to calculate the power of a number. The number and its power are input from user.
- (4) Write a program to reverse a number.
- (5) Write a program to display half pyramid using stars pattern.

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- (6) Write a program to display inverted half pyramid using stars pattern.

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(7) Write a program to display a full pyramid using stars pattern.

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(8) Write a program to display cross or X-shape using stars pattern.

A 10x10 grid of asterisks (\*) forming a diamond shape. The pattern is symmetric both horizontally and vertically. The top row has 1 asterisk at column 5. The second row has 2 asterisks at columns 4 and 6. The third row has 3 asterisks at columns 3, 5, and 7. The fourth row has 4 asterisks at columns 2, 4, 6, and 8. The fifth row has 5 asterisks at columns 1, 3, 5, 7, and 9. The sixth row has 4 asterisks at columns 2, 4, 6, and 8. The seventh row has 3 asterisks at columns 3, 5, and 7. The eighth row has 2 asterisks at columns 4 and 6. The ninth row has 1 asterisk at column 5. The tenth row has 0 asterisks.