

1. Write a program to reverse all the words in the sentence and count palindrome words
2. Write a program to find Anagram
3. Write a program to replace every word 1<sup>st</sup> character with \$ , 2<sup>nd</sup> third character with \* and last second character with %.. Write a program that could handle exception.
4. Write a program to make matrix rotate for 90 degree, 180 degree, 270 degree or 360 degree with proper options.
5. Write a program to find smallest number in each row and column in a 2 dimensional array.
6. Write a program to make 2 dimensional array transpose and display the transposed matrix.
7. Find the sum of first half of 2 dimensional array and sum of second half. If the sum is same display the array.
8. Write a program to store the following pattern in a 2 dimensional character array and display.

*				*
	*		*	
		3		
	*		*	
*				*

N = 5

*						*
	*				*	
		*		*		
			4			
		*		*		
	*				*	
*						*

N=7

9. Write a compile time custom exception java program for the following conditions, if the student average marks for three subjects is less than 35. Override getMessage() to display all the subject marks. Write a proper program with neat project structure.
10. Write a compile time custom exception java program for the following conditions, if the patient age is between 40 to 50 and if the name of patient is having letter 'S'/'s' or 'H'/'h'. Override getMessage() to display all the details of patient. Write a proper program with neat project structure.
11. Write a program to store the records of dresses in a proper collection type. Display only women wear in price high to low.
12. Write a program to store the records of student in a proper collection type. Display them by name wise from Z to A
13. Write a program to store the records of mobile phone with imei number as key and model as value. Display only a particular brand phone.
14. Write Singleton class.
15. Write an example for thread safe.

### **Instructions:**

- Time: 1 hour
- Questions 8, 14 and 15 compulsory.