Wrapper Classes, Loops and Arrays (Section: 036)

Explain the following concepts:

- ***Wrapper class***
- ***Need for the wrapper class***
- ***Different techniques of wrapping***
- ***Autoboxing***
- ***Unboxing***

Q1. Write a program to convert an integer to an Integer object.

(a) Autoboxing

(b) Using Constructor

Q2. Write a program to convert a float to a Float object.

(a) Autoboxing

(b) Using Constructor

Q3. Write a program to convert a double to a Double object.

(a) Autoboxing

(b) Using Constructor

Q4. Write a program to convert a boolean to a Boolean object.

(a) Autoboxing

(b) Using Constructor

Q5. Write a program to read an integer as a string and convert it to an Integer object.

Q6. Write a program to read a float as a string and convert it to a Float object.

Q7. Write a program to read a double as a string and convert it to a Double object.

Q8. Write a program to read a boolean as a string and convert it to a Boolean object.

Explain the concept of converting a base data type to an object type(Wrapping) using the valueOf() method.

Q9. Write a program that reads to convert int, float, double, and boolean as string types and convert them to respective object types using the valueOf method.

Q10. Write a program to design a simple calculator (only +,-,*,/ operations). The calculator works as follows:

Input: ”123+345”

Output: Sum=468

Input: ”5*10”

Output: mul=50

Explain the concept of converting object type to base type.

Explain the method used to do so.

Q11. Write a program that reads a double number as a sting and converts it to a double base type.

Q12. Write a program that reads an integer number as a sting and converts it to an int base type.

Explain the following concepts:

- ***Arrays***
- ***Conditional Statements***
- ***Loops***

Q13. Write a program that prompts the user to input a positive integer. It should then print the multiplication table of that number.

Q14. Write a java program to calculate HCF and LCM of Two given number.

Q15. Write a program to calculate the sum of following series where n is input by user. 1 + 1/2 + 1/3 + 1/4 + 1/5 +……1/n

Q16. Write a program to enter the numbers till the user wants and at the end the program should display the largest and smallest numbers entered.

Q17. Write a java program to find the minimum and maximum element in an array.

Q18. Write java program to find the Kth largest and Kth smallest number in an array.

Q19. Write a java program to reverse the given array. (Without using Library function)

Q20. Write a java program to sort the given array. (Without using Library function)