SIKSHA 'O' ANUSANDHAN DEEMED TO BE UNIVERSITY
INSTITUTE OF TECHNICAL EDUCATION & RESEARCH
Introduction to Computer Programming (2024)
Minor Project – 1
(Submission deadline: 03-02-2024 11:55 PM)

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[This assignment is given to test the knowledge on Array, String, Bit-wise operator and Loop]

Problem 1:[5 points] There are 4 integers in successive memory locations in an array. Write a program to rotate the 4 integers to the right by 2 bits according to the procedure given below. Print the original and resulting array in both integer and binary string form. To print binary string you can use the following library method:

Integer.toBinaryString(s[i])

Original array:

10	11	12	13

Original array showing 32 bit binary value:

0000----------1010	0000----------1011	0000----------1100	0000----------1101

After rotation array showing 32 bit binary value:

0100----------0010	1000----------0010	1100----------0011	0000----------0011

After rotation array:

1073741826	-2147483646	-1073741821	3

Use a method rotateRightBy2Bits() with the following header:

public static void rotateRightBy2Bits(int s[])

Problem 2:[5 points] Given a decimal integer (**n**) and base value (**b**). Write a Java program to convert **n** to the corresponding target value **n'** such that:

$$(n)_{10} = (n')_b$$

[As the target value may contain both alphabets and digits, it is better to use String]

Use a method convertToAnyBase() with the following header:

public static String convertToAnyBase(int n, int b)

(Create 2 Java files Problem1_RotateRight.java, Problem2_ConvertToAnyBase.java and a Description file DescriptionAndOutput.doc. Keep all in a folder named same as your Regd.No. and compress it. Submit the compressed file to your concerned teacher with in the deadline given above.)

*******End of question*******