I 2207

MIPS Assembly

Lab 3

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Exercise 1

Write a program to perform the multiplication of two positive integers using the addition.

Example

7×3= 7+7+7	**3×7= 7+7+7**

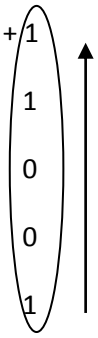
Exercise 2

Write a program to convert a natural number (maximum 1023) into a binary number. The resulting binary number must be stored in an integer array.

Example

Conversion (19**) ->**0000010011

19/2 = 9*2 + 1
9/2 = 4*2+ 1
4/2 = 2*2+ 0
2/2 = 1*2+ 0
1/2 = 0*2+ 1



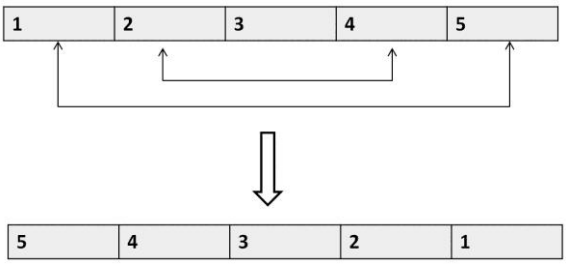
Exercise 3

The following C-code reverses an array of 5 integers.

```
int T[]={1,2,3,4,5},i,j=4,temp;

for(i=0;i<2;i++)
{
	temp=T[i];
	T[i]=T[j];
	T[j]=temp;
	j--;
}

for(i=0;i<5;i++)
	printf("%d",T[i]);
```



a. Write the corresponding code in MIPS language
b. Generalize your code by allowing user to enter the number N $\in$[1, 50] and values of cases.