

# CREATIVE PROBLEM SOLVING

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## Converting Number to Words

**CONCEPTS:** Arithmetic, Loop, Strings

**LEVEL:** Hard

On cheque it's a mandate to mention the amount both in figures as well as in words so that there is no confusion at all. Businessmen who have to write lots of cheques treat this as unnecessary burden on themselves. We need to create a software solution that takes amount as a number and converts it into words automatically.

Same problem is there for Automated Token Number Teller, where a token number is displayed and it needs to be spoken by speech engine that reads English string and speaks it out.

### PROBLEM STATEMENT

Write a function that takes an integer number as input and prints out the number in words.

```
void numToWords(int num);
```

We are considering only values upto LAKHS. Anything beyond that should be considered as invalid input and program should terminate for that.

Also handle the case of negative numbers.

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## SAMPLE TEST CASES

SR	Input	Output
1	0	Zero
2	1590	One Thousand Five Hundred and Ninety
3	1059	One Thousand and Fifty Nine
4	1519	One Thousand Five Hundred and Nineteen
5	1500	One Thousand Five Hundred
6	1100	One Thousand One Hundred
7	1001	One Thousand and One
8	21519	Twenty One Thousand Five Hundred and Nineteen
9	21009	Twenty One Thousand and Nine
10	2151	Two Thousand One Hundred and Fifty One
11	-1590	Minus One Thousand Five Hundred and Ninety
12	215100	Two Lakh Fifteen Thousand One Hundred

```
char *numbers[] = {"Zero", "One", "Two", "Three", "Four",  
"Five", "Six", "Seven", "Eight", "Nine", "Ten", "Eleven",  
"Twelve", "Thirteen", "Fourteen", "Fifteen",  
"Sixteen", "Seventeen", "Eighteen", "Nineteen", "Twenty"  
};  
char *tens[] = {"", "Ten", "Twenty", "Thirty", "Forty",  
"Fifty", "Sixty", "Seventy", "Eighty", "Ninety", "Hundred"};
```