Grading Students

RATE THIS CHALLENGE

HackerLand University has the following grading policy:

- Every student receives a $grade$ in the inclusive range from 0 to 100.
- Any $grade$ less than 40 is a failing grade.

Sam is a professor at the university and likes to round each student's $grade$ according to these rules:

- If the difference between the $grade$ and the next multiple of 5 is less than 3, round $grade$ up to the next multiple of 5.
- If the value of $grade$ is less than 38, no rounding occurs as the result will still be a failing grade.

Examples

- $grade = 84$ round to 85 (85 - 84 is less than 3)
- $grade = 29$ do not round (result is less than 40)
- $grade = 57$ do not round (60 - 57 is 3 or higher)

Given the initial value of $grade$ for each of Sam's n students, write code to automate the rounding process.

Function Description

Complete the function gradingStudents in the editor below.

gradingStudents has the following parameter(s):

- int grades[n]: the grades before rounding

Returns

- int[n]: the grades after rounding as appropriate

Input Format

The first line contains a single integer, n, the number of students.
Each line i of the n subsequent lines contains a single integer, $grades[i]$.

Constraints

- $1 \leq n \leq 60$
- $0 \leq grades[i] \leq 100$

Sample Input 0

```
4
73
67
38
33
```

Sample Output 0

```
75
67
40
33
```

Explanation 0

ID	Original Grade	Final Grade
1	73	75
2	67	67
3	38	40
4	33	33

1. Student 1 received a 73, and the next multiple of 5 from 73 is 75. Since $75 - 73 < 3$, the student's grade is rounded to 75.
2. Student 2 received a 67, and the next multiple of 5 from 67 is 70. Since $70 - 67 = 3$, the grade will not be modified and the student's final grade is 67.
3. Student 3 received a 38, and the next multiple of 5 from 38 is 40. Since $40 - 38 < 3$, the student's grade will be rounded to 40.
4. Student 4 received a grade below 33, so the grade will not be modified and the student's final grade is 33.

Change Theme Language Python 3

```python
# Complete the 'gradingStudents' function below.
#
# The function is expected to return an INTEGER_ARRAY.
# The function accepts INTEGER_ARRAY grades as parameter.
#

def gradingStudents(grades):
    rounded_grades = []
    for grade in grades:
        if grade < 38:
            rounded_grades.append(grade)
        else:
            next_multiple = (grade // 5 + 1) * 5
            if next_multiple - grade < 3:
                rounded_grades.append(next_multiple)
            else:
                rounded_grades.append(grade)
    return rounded_grades

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    grades_count = int(input().strip())

    grades = []

    for _ in range(grades_count):
        grades_item = int(input().strip())
        grades.append(grades_item)

    result = gradingStudents(grades)

    fptr.write('\n'.join(map(str, result)))
    fptr.write('\n')

    fptr.close()
```

Line: 46 Col: 1

Upload Code as File Test against custom input Run Code Submit Code

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Input (stdin) Download

```
4
73
67
38
33
```

Your Output (stdout)

```
75
67
40
33
```

Expected Output Download

```
75
67
40
33
```

Blog | Sc