

Clicker Questions

- **Question 1:** What is the output of the program on the right when it runs with **input-1.txt** as standard input?
- **Question 2:** What is the output of the program on the right when it runs with **input-2.txt** as standard input?
- **Question 3:** What is the output of the program on the right when it runs with **input-3.txt** as standard input?
- **Question 4:** What is the output of the program on the right when it runs with **input-4.txt** as standard input?

(BTW, I'm omitting the "include" and "using" lines to conserve space. Just pretend that the correct ones are there.)

(Also, don't print the final "newline" -- just answer with the string that is printed.)

```
int main()
{
    int i, n;
    string s;
    string rv;

    rv = "";
    while (cin >> n) {
        for (i = 0; i < n; i++) {
            if (cin >> s) rv.push_back(s[0]);
        }
    }
    cout << rv << endl;
    return 0;
}
```

<u>input-1.txt</u>	<u>input-2.txt</u>	<u>input-3.txt</u>	<u>input-4.txt</u>
1 Fred	2	3 A BB	3 7 5
	Marco	CCC 2 Xerxes	3 4 7
	Polo	Yassin Zelda	6 8 3
	3		9 8 3
	Drop		
	Dead		
	Fred		

Clicker Answers

Question 1:

- The program reads an integer **n**, and then iterates **n** times.
- For each iteration, it reads a string, and if that was successful, appends the first character of the string to the string **rv**.
- The program repeats this process until reading **n** fails.
- Then it prints out **rv**.

So, with input 1, it reads the integer 1, then reads the string "Fred", and appends the 'F' to **rv**. The answer is

F

Question 2: Now, the main **while()** loop iterates twice:

- It reads the number 2 and then "Marco" and "Polo". At this point, **rv** is "MP".
- It reads the number 3 and then "Drop", "Dead" and "Fred". At this point, **rv** is "MPDDF".

The answer is:

MPDDF

Question 3: The main **while()** loop iterates twice:

- It reads the number 3 and then "A", "BB" and "CCC". At this point, **rv** is "ABC".
- It reads the number 2 and then "Xerxes" and "Yassin". At this point, **rv** is "ABCXY".
- It tries to read a number, but it fails because the next word is "Zelda". So it falls out of the **while()** loop.

The answer is:

ABCXY

Question 3: Now the main loop iterates three times:

- It reads the number 3 and then "7", "5" and "3". At this point, **rv** is "753".
- It reads the number 4 and then "7", "6", "8" and "3". At this point, **rv** is "7537683".
- It reads the number 9 and then "8" and "3". At this point, **rv** is "753768383".
- It tries to continue reading strings, but it reaches EOF, so the **cin** statement fails.
- It now tries to read an integer, but the **cin** is still in a failed state, so it out of the **while()** loop.

The answer is:

753768383