

On the back of the page, write a syntactically correct C++ function `mergeWords` that takes a vector of strings and returns a single string consisting of all the values in the vector concatenated (joined) together and converted to lower-case. Your function must use parameters and return types for input and output (not `cin` or `cout`). The code below shows an example call to `mergeWords`.

```
#include <iostream>
#include <vector>
#include <string>
#include <cctype>

int main()
{
    std::vector<std::string> words{"Hello", "World", "again!"};
    auto sentence = mergeWords(words);
    std::cout << sentence << std::endl;

    return 0;
}
```

The output of the above example would be: `helloworldagain!`

A sample solution is as follows:

```
std::string mergeWords(std::vector<std::string> words)
{
    std::string result{};
    for (auto word : words)
    {
        result += word;
    }

    for (auto& ch : result)
    {
        ch = std::tolower(ch);
    }

    return result;
}
```