

Write a function called `reverse` that accepts a c-string as an argument and reverses that argument in place returning the address of the first element of the c-string as a character pointer when you are finished. For example, if your c-string contains the string “Happy Birthday!” then after a call to the function your string would contain “!yadhtriB yppaH”. For this assignment you may not use the `string.h` library or any other library except `stdio.h`. You may assume the following main program which would print the string forward, backward, and then forward again twice:

```
int main(int argc, char* argv[])
{
    char word[] = "Happy Birthday!";

    printf("%s\n", word);
    reverse(word);
    printf("%s\n", word);
    printf("%s\n", reverse(word));
    printf("%s\n", word);
    return 0;
}
```

Place the code for your function in a file called `reverse.c` and submit only this file to me on blackboard. The file should contain the definition for your function `reverse` and nothing else. I will use my own header file and main program to test your code.