

```
1 #include <stdio.h>
2
3 int main() {
4     char str[200], out[200];
5     int i, j = 0;
6
7     printf("Enter a string: ");
8     gets(str);
9
10    for(i = 0; str[i] != '\0'; i++)
11        if(!(str[i]=='a'||str[i]=='e'||str[i]=='i'||str[i]=='o'||str[i]=='u'|||
12            str[i]=='A'||str[i]=='E'||str[i]=='I'||str[i]=='O'||str[i]=='U'))
13            out[j++] = str[i];
14
15    out[j] = '\0';
16
17    printf("Output: %s", out);
18    return 0;
19}
20
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Code + □ 🗑 ... [ ] X

cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
tempCodeRunnerFile.c:8:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
  8 |     gets(str);
     |     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
  260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead.")
     | ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
  227 | #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
     | ^
1 warning generated.
warning: this program uses gets(), which is unsafe.
Enter a string: beautiful day
Output: btfl dy%
rajatsingh@Rajats-MacBook-Air ~ %
```

```
1 #include <stdio.h>
2
3 int main() {
4     char str[200];
5     int freq[26] = {0}, i;
6
7     printf("Enter a string: ");
8     gets(str);
9
10    for(i = 0; str[i] != '\0'; i++) {
11        if(str[i] >= 'a' && str[i] <= 'z') {
12            freq[str[i] - 'a']++;
13            if(freq[str[i] - 'a'] == 2) {
14                printf("First repeating lowercase: %c", str[i]);
15                return 0;
16            }
17        }
18    }
19
20    printf("No repeating lowercase alphabet");
21
22    return 0;
23 }
```

```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
● rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
tempCodeRunnerFile.c:8:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
  8 |     gets(str);
   |     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
 260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead.")
   | ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
 227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
   | ^
1 warning generated.
warning: this program uses gets(), which is unsafe.
Enter a string: abcdbea
First repeating lowercase: be
○ rajatsingh@Rajats-MacBook-Air ~ %
```

The screenshot shows a code editor interface with a dark theme. The top bar includes tabs for 'Welcome', 'C C PROGRAMMING PROJECT .c', and '#include <stdio.h> Untitled-1'. The main area displays the following C code:

```
3 int main() {
4     char a[100], b[100];
5     int count[256] = {0}, i;
6
7     printf("Enter first string: ");
8     gets(a);
9     printf("Enter second string: ");
10    gets(b);
11
12    for(i = 0; a[i] != '\0'; i++) count[(int)a[i]]++;
13    for(i = 0; b[i] != '\0'; i++) count[(int)b[i]]--;
14
15    for(i = 0; i < 256; i++)
16        if(count[i] != 0) {
17            printf("Not Anagrams");
18            return 0;
19        }
20
21    printf("Anagrams");
22    return 0;
23 }
```

The screenshot shows a terminal window with the following output:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
```

```
rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/tempCodeRunnerFile"
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
227 | #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
tempCodeRunnerFile.c:10:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
 10 |     gets(b);
|     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
 260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead.")
|     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
227 | #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
2 warnings generated.
warning: this program uses gets(), which is unsafe.
Enter first string: listen
Enter second string: silent
Anagrams
rajatsingh@Rajats-MacBook-Air ~ %
```

The screenshot shows a code editor interface with three tabs: "Welcome", "C C PROGRAMMING PROJECT .c", and "C #include <stdio.h> Untitled-1". The "C C PROGRAMMING PROJECT .c" tab contains the following C code:

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int main() {
5     char str[200], word[200], longest[200];
6     int i = 0, j = 0, max = 0;
7
8     printf("Enter a sentence: ");
9     if (!fgets(str, sizeof(str), stdin)) return 0;
10    int len = strlen(str);
11    if (len > 0 && str[len-1] == '\n') str[len-1] = '\0';
12
13    longest[0] = '\0';
14
15    while (str[i] != '\0') {
16        if (str[i] != ' ') {
17            word[j++] = str[i];
18        } else {
19            if (j > 0) {
20                word[j] = '\0';
21                if (j > max) { max = j; strcpy(longest, word); }
22                j = 0;
23            }
24        }
25        i++;
26    }
27 }
```

The "TERMINAL" tab at the bottom shows the command-line output of running the program:

```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
● rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
Enter a sentence: programming in c language
Longest word: programming
○ rajatsingh@Rajats-MacBook-Air ~ %
```

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int main() {
5     char a[100], b[100], temp[200];
6
7     printf("Enter first string: ");
8     gets(a);
9     printf("Enter second string: ");
10    gets(b);
11
12    strcpy(temp, a);
13    strcat(temp, b);
14
15    if(strstr(temp, b))
16        printf("Rotation");
17    else
18        printf("Not Rotation");
19
20    return 0;
21 }
22
```

```
PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL PORTS Code + - × ... | []

rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
 227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
|
tempCodeRunnerFile.c:10:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in t
he design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
 10 |     gets(b);
|
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
 260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is high
ly recommended that you use fgets(3) instead.")
|
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
 227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
|
2 warnings generated.
warning: this program uses gets(), which is unsafe.
Enter first string: ABCD
Enter second string: CDAB
Rotation: 2
rajatsingh@Rajats-MacBook-Air ~ %
```

The screenshot shows a C programming environment with two tabs open. The left tab is titled 'C PROGRAMMING PROJECT.c' and contains the following C code:

```
1 #include <stdio.h>
2
3 int main() {
4     char str[200], word[50];
5     int i = 0, j = 0;
6
7     printf("Enter a sentence: ");
8     gets(str);
9
10    while(str[i] != '\0') {
11        if(str[i] != ' ') {
12            word[j++] = str[i];
13        } else {
14            word[j] = '\0';
15            for(int k = j-1; k >= 0; k--) printf("%c", word[k]);
16            printf(" ");
17            j = 0;
18        }
19        i++;
20    }
21
22    word[j] = '\0';
23    for(int k = j-1; k >= 0; k--) printf("%c", word[k]);
24
25    return 0;
26 }
27
```

The right tab is titled '#include <stdio.h> Untitled-1' and contains a blank document.

Below the tabs, there are several status indicators and icons. The bottom of the screen shows the terminal output:

```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
● rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
tempCodeRunnerFile.c:8:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in th
e design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
  8 |     gets(str);
   |     ^
/Libra.../Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
  260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is high
ly recommended that you use fgets(3) instead.")
   | ^
/Libra.../Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
  227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
   | ^
1 warning generated.
warning: this program uses gets(), which is unsafe.
Enter a sentence: hello world welcome
olleh dlrow emoclew
○ rajatsingh@Rajats-MacBook-Air ~ %
```

```
1 #include <stdio.h>
2
3 int main() {
4     char str[100];
5     int i;
6
7     printf("Enter full name: ");
8     gets(str);
9
10    if(str[0] != ' ') printf("%c.", str[0]);
11
12    for(i = 1; str[i] != '\0'; i++)
13        if(str[i] == ' ' && str[i+1] != ' ')
14            printf("%c.", str[i+1]);
15
16    return 0;
17 }
18
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
```

```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
tempCodeRunnerFile.c:8:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
  8 |     gets(str);
   |     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
  260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead.")
   | ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
  227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
   | ^
1 warning generated.
warning: this program uses gets(), which is unsafe.
Enter full name: RAJAT SINGH
R.S.
rajatsingh@Rajats-MacBook-Air ~ %
```

```
1 #include <stdio.h>
2
3 int main() {
4     char str[100], surname[50];
5     int i, j = 0, lastStart = 0;
6
7     printf("Enter full name: ");
8     gets(str);
9
10    for(i = 0; str[i] != '\0'; i++)
11        if(str[i] == ' ')
12            lastStart = i + 1;
13
14    for(i = lastStart; str[i] != '\0'; i++)
15        surname[j++] = str[i];
16    surname[j] = '\0';
17
18    if(str[0] != ' ') printf("%c.", str[0]);
19
20    for(i = 1; str[i] != '\0'; i++)
21        if(str[i] == ' ' && i+1 != lastStart)
22            printf("%c.", str[i+1]);
23
24    printf("%s", surname);
25
26    return 0;
27 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

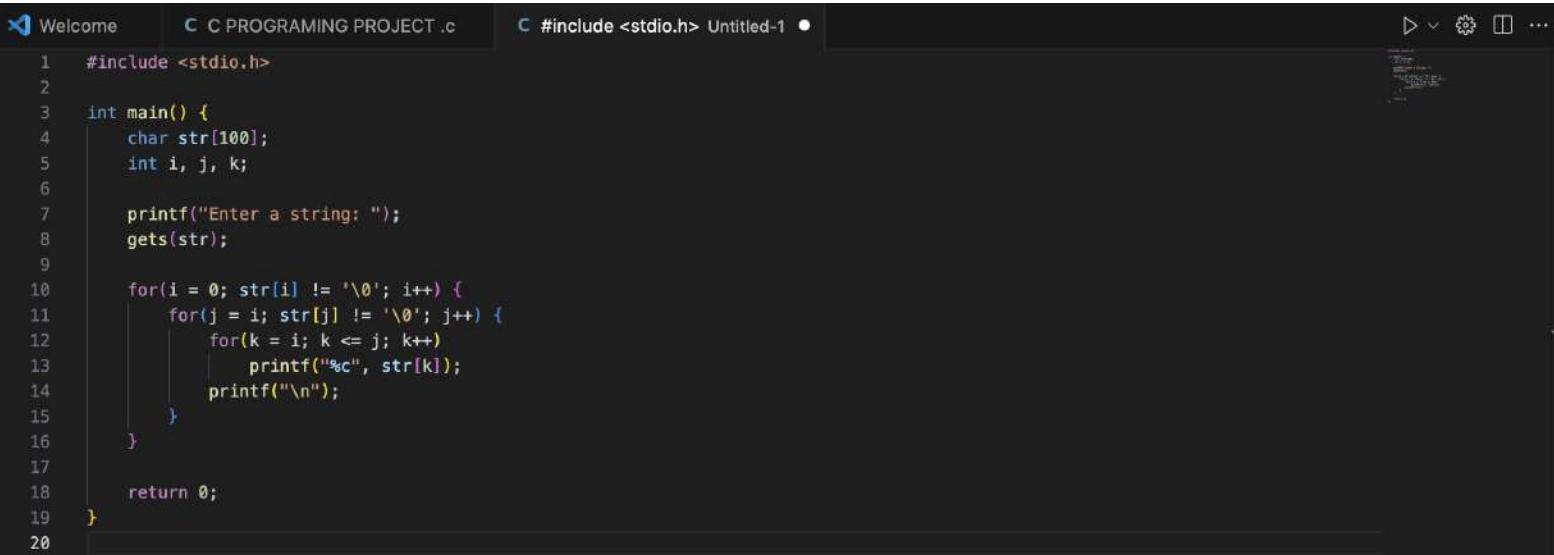
```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
● rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
tempCodeRunnerFile.c:8:5: warning: 'gets' is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
  8 |     gets(str);
     |     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
  260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead.")
     | ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
  227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
     |
1 warning generated.
warning: this program uses gets(), which is unsafe.
Enter full name: RAHUL SINGH RAJPUT
R.S.RAJPUT
○ rajatsingh@Rajats-MacBook-Air ~ %
```

The screenshot shows a code editor interface with a tab bar at the top. The active tab is 'C PROGRAMMING PROJECT.c'. Below the tabs is a code editor window containing the following C code:

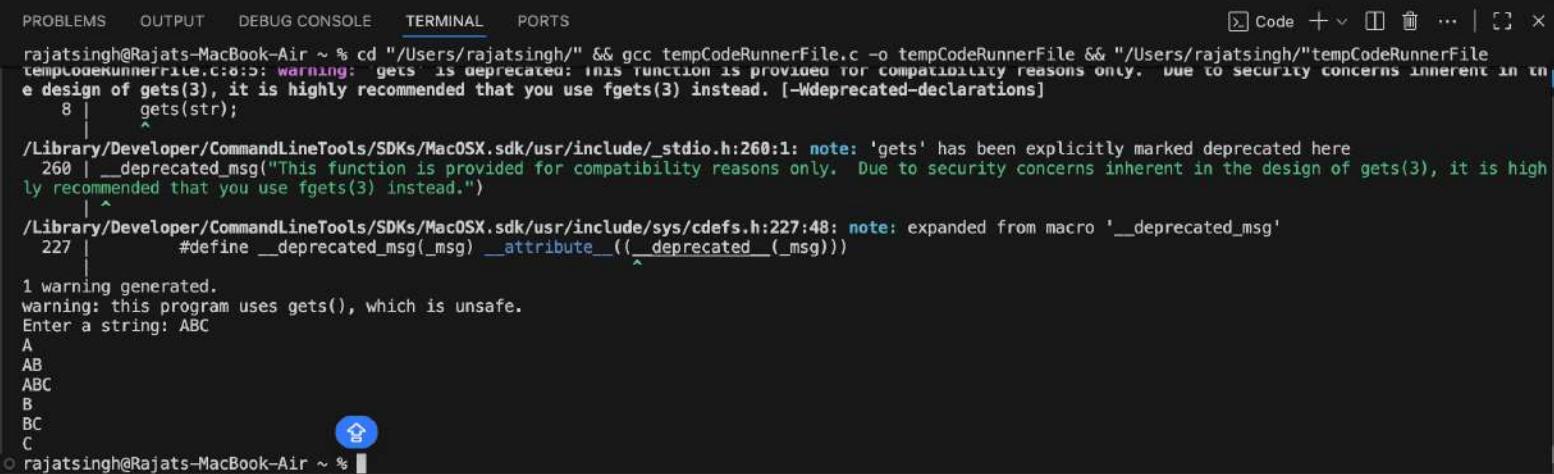
```
1 #include <stdio.h>
2
3 int main() {
4     char buf[32];
5     int d, m, y;
6     printf("Enter date (dd/04/yyyy): ");
7     if (!fgets(buf, sizeof(buf), stdin)) return 0;
8
9     if (sscanf(buf, " %d / %d / %d", &d, &m, &y) != 3) {
10        printf("Invalid format\n");
11        return 0;
12    }
13
14    if (m != 4) {
15        printf("Month is not 04\n");
16        return 0;
17    }
18
19    if (d < 1 || d > 31 || y < 0) {
20        printf("Invalid date\n");
21        return 0;
22    }
23
24    printf("Output: %02d-Apr-%04d\n", d, y);
25    return 0;
26 }
27
```

Below the code editor are several tabs: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The TERMINAL tab is currently selected, displaying the following terminal session:

```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
● rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
Enter date (dd/04/yyyy): 23/04/2024
Output: 23-Apr-2024
○ rajatsingh@Rajats-MacBook-Air ~ %
```



```
1 #include <stdio.h>
2
3 int main() {
4     char str[100];
5     int i, j, k;
6
7     printf("Enter a string: ");
8     gets(str);
9
10    for(i = 0; str[i] != '\0'; i++) {
11        for(j = i; str[j] != '\0'; j++) {
12            for(k = i; k <= j; k++)
13                printf("%c", str[k]);
14            printf("\n");
15        }
16    }
17
18    return 0;
19 }
20
```



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
```

```
rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
tempCodeRunnerFile.c:8:9: warning: gets is deprecated: This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead. [-Wdeprecated-declarations]
8 |     gets(str);
|     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/_stdio.h:260:1: note: 'gets' has been explicitly marked deprecated here
260 | __deprecated_msg("This function is provided for compatibility reasons only. Due to security concerns inherent in the design of gets(3), it is highly recommended that you use fgets(3) instead.")
|     ^
/Library/Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/sys/cdefs.h:227:48: note: expanded from macro '__deprecated_msg'
227 |         #define __deprecated_msg(_msg) __attribute__((__deprecated__(_msg)))
|
1 warning generated.
warning: this program uses gets(), which is unsafe.
Enter a string: ABC
A
AB
ABC
B
BC
C
rajatsingh@Rajats-MacBook-Air ~ %
```