insertChar

Write the C function that takes in a string str1 as an argument, copies the contents of character string str1 into character string str2. In addition, the function also has a character parameter ch. For every three characters copied from str1 to str2, the character ch is inserted into str2. The function returns the resultant string to the calling function via call by reference. For example, if the string str1 is "abcdefg", and the inserted character ch is '#', then the resultant string str2 = "abc#def#g" will be returned to the calling function. The function prototype is given as follows:

```
void insertChar(char *str1, char *str2, char ch);
```

A sample program template is given below to test the function:

```
#include <stdio.h>
#include <string.h>
void insertChar(char *str1, char *str2, char ch);
int main()
{
  char a[80],b[80];
  char ch, *p;

  printf("Enter a string: \n");
  fgets(a, 80, stdin);
  if (p=strchr(a,'\n')) *p = '\0';
  printf("Enter a character to be inserted: \n");
  ch = getchar();
  insertChar(a,b,ch);
  printf("insertChar(): ");
  puts(b);
  return 0;
}
void insertChar(char *str1, char *str2, char ch)
{
 /* Write your code here */
}
```

Some sample input and output sessions are given below:

(1) Test Case 1:
Enter a string:
abc de
Enter a character to be inserted:
#
insertChar(): abc# de#

(2) Test Case 2:
Enter a string:
abc
Enter a character to be inserted:
#

insertChar(): abc#

(3) Test Case 3:
Enter a string:
I am a boy.
Enter a character to be inserted:
$
insertChar(): I a$m a$ bo$y.

(4) Test Case 4:
Enter a string:
hi
Enter a character to be inserted:
$
insertChar(): hi