#include <stdio.h>

#include <string.h>

void sample\_function(char \*input) {

char buffer[10];

strcpy(buffer, input);

}

void safe\_function(char \*input) {

printf("In safe\_function\n");

sample\_function(input);

}

int main() {

char large\_input[100];

printf(“Enter the string\n”);

scanf(“%s”,large\_input);

safe\_function(large\_input);

printf("Main function complete.\n");

return 0;

}

Consider the above program. Answer the following questions.

1. What is the value of lr and sp for the above program after each and every call of the functions?
2. There might be an issue in the program [if we change the input], identify the issue by trial and error method. Use appropriate registers and memory locations to show the error.

* Hint: Check array input value and give a large input

1. Use appropriate gdb commands to display a string stored in a memory location.
2. Solve the error in the program and add necessary statements in the code. Name the error you have found.