

# objdump and StackFrame

*Instructions for submission: PPL Assignment 2*

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## Problem Statement:

Use objdump to read the object file of a C program and demonstrate how a stack frame is built and destroyed.

## Objectives:

1. To use **objdump** to analyze object files.
2. To demonstrate how stack frame is created by studying the disassembled code

## Execution:

*Steps to execute and submit the assignment:*

1. Write a C Program with a user defined *function()* and declare *char[10]* and *char[5]* character arrays of length [10] and [5] each.
2. In the main function, declare three variables *a=1, b=5, c=6* and call the *function()*.
3. Compile and save the intermediate files using ***>gcc --save-temps file2.c***
4. Use objdump command: ***>objdump file2.o*** and take a screenshot of options available. Also try the following options (and take screenshots):

I. **-f** : Display File Headers *e.g. >objdump -f file2.o*

II. **-x**: Display all headers of file with memory segments *e.g. >objdump -x file2.o*

III. **--disassemble-all**: To save the disassembled (assembly lang) output file.

*E.g. > objdump -- disassemble-all file2.o* will generate the disassembled code for the object file with sections.

5. Take a screenshot of the file and **highlight** the code that is being used to create and destroy the stack frame for *function()* and *main()*. (*rbp* and *rsp* registers)
6. Place your C File along with all the screenshots in a folder for submission.