

UNIVERSITÀ DI TRIESTE	
<b>Course:</b> Operating Systems	<b>Professor:</b> Martino Trevisan
<b>Date:</b> December 17, 2023	<b>Version:</b> A
<b>First and Last Name:</b>	
<b>Student ID:</b>	

**Instructions:**

For each open question, please clearly write any assumption you make. Write in the given box using a comprehensible handwriting.

1. A System Call
  - A. Is used by the OS to orchestrate the kernel modules
  - B. Is used by a process to use a functionality of the software library
  - C. Is used by a process to use a functionality of the OS
  - D. Is used by the OS to schedule the active processes
  
2. The following script
 

```
ls | wc -l
```

  - A. Prints the number of subdirectories in the current folder
  - B. Prints the number of files/subdirectories in the current folder
  - C. Counts the file in the computer
  - D. Prints the number of active processes
  
3. A system has 4 GB of RAM and Virtual Memory with 1 kB pages.
  - (a) Compute how many bits the page offset is.
  - (b) Compute the number of pages of the system.

4. Describe the difference between the multi-process and multi-thread paradigm