

REPORT ASSIGNMENT
OPERATING SYTEM A CLASS



“Shell Programming 2”

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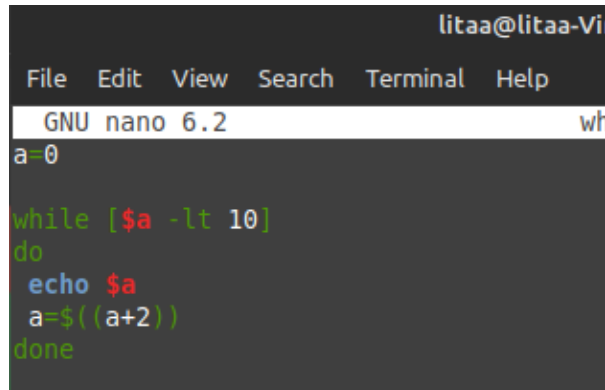
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- **While Loop**

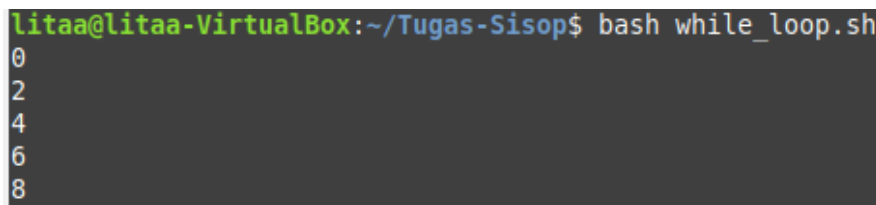
To execute a set of command repeatedly until some condition occurs. Declare the command with 'while' command. The picture below shows the condition for the while loop is, a have value as 0. Print the value of 'a' till it reach least until 10, and for every next number that will printed, 'a + 2'.



```
litaa@litaa-Vi
File Edit View Search Terminal Help
GNU nano 6.2 wh
a=0

while [$a -lt 10]
do
  echo $a
  a=$((a+2))
done
```

To see the output of the declared command, use 'bash file_name' command. As we can see from the picture below it print out an order of number with determined condition.



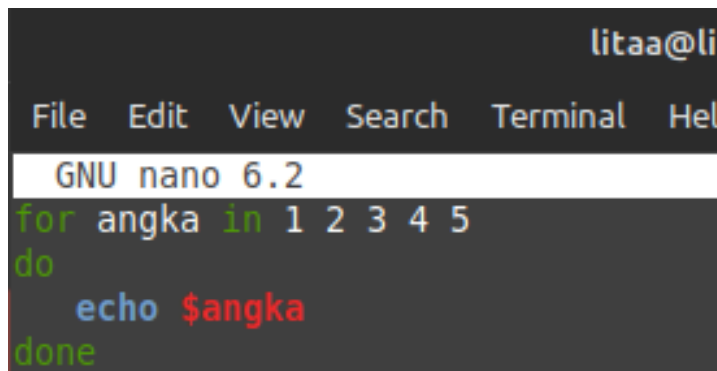
```
litaa@litaa-VirtualBox:~/Tugas-Sisop$ bash while_loop.sh
0
2
4
6
8
```

- **For Loop**

It repeats a set of commands for every item in a list.

1. **For Loop 1**

Said we have 'angka' with values 1 2 3 4 5. Print out the 'angka' with echo command.



```
litaa@li
File Edit View Search Terminal Hel
GNU nano 6.2
for angka in 1 2 3 4 5
do
  echo $angka
done
```

The output of the file after we open it with bash command will looks like the picture below.

```
litaa@litaa-VirtualBox:~/Tugas-Sisop$ bash for_loop.sh
1
2
3
4
5
```

2. For Loop 2

In this case we can also write it like the picture below. It set condition to print out 'angka =1' but print it less than 5, and for every angka add it by 1.

```
litaa@litaa-Vi
File Edit View Search Terminal Help
GNU nano 6.2 f
for ((angka=1; angka<=5; angka=angka+1))
do
    echo $angka
done
```

The output of the script will be shown like the picture below.

```
litaa@litaa-VirtualBox:~/Tugas-Sisop$ bash for_loop2.sh
1
2
3
4
5
```

- **Select Loop**

Select loop provides an easy way to create a numbered menu from which users can selected options. From the picture below, it has 'minuman' with 'teh kopi air jus susu semua gaada' values. If the users choose teh kopi air semua, it will print condition said "Maaf, habis". If the users choose jus and susu, it will print condition said "Tersedia". And the last condition is if the users choose gaada, it will print condition said "Tidak ada di daftar menu".

```
litaa@litaa-VirtualBox: ~/Tugas-Sis
File Edit View Search Terminal Help
GNU nano 6.2 select loop.sh *
select minuman in teh kopi air jus susu semua gaada
do
case $minuman in
teh|kopi|air|semua|)
echo "Maaf, habis"
;;
jus|susu)
echo "Tersedia"
;;
gaada)
break
;;
*) echo "Tidak ada di daftar menu"
;;
esac
done
```

As we try to access the file and try to choose 'minuman' from the scripted file. It will shows like the picture shows below.

```
litaa@litaa-VirtualBox:~/Tugas-Sisop$ bash select_loop.sh
1) teh
2) kopi
3) air
4) jus
5) susu
6) semua
7) gaada
#? 6
Maaf, habis
#? 3
Maaf, habis
#? 1
Maaf, habis
#? 9
Tidak ada di daftar menu
#? 4
Tersedia
#? 6
Maaf, habis
#? 7
```

- **Until Loop**

Used for execute a block of code until the expression is evaluated to the false statement. The difference with while loop is, while loop runs the command while the statement is true. As the picture shows below, if the condition of the printed number is not under the 10 it will stop executing the calculation.

```
litaa@litaa-VirtualBox: ~/T
File Edit View Search Terminal Help
GNU nano 6.2 untill_loop
a=0

until [ ! $a -lt 10 ]
do
    echo $a
    a=$((a + 2))
done
```

Using 'bash file_name' to see if the command can run. And it'll shows like the picture below.

```
litaa@litaa-VirtualBox:~/Tugas-Sisop$ bash untill_loop.sh
0
2
4
6
8
```

- **Practice Task**

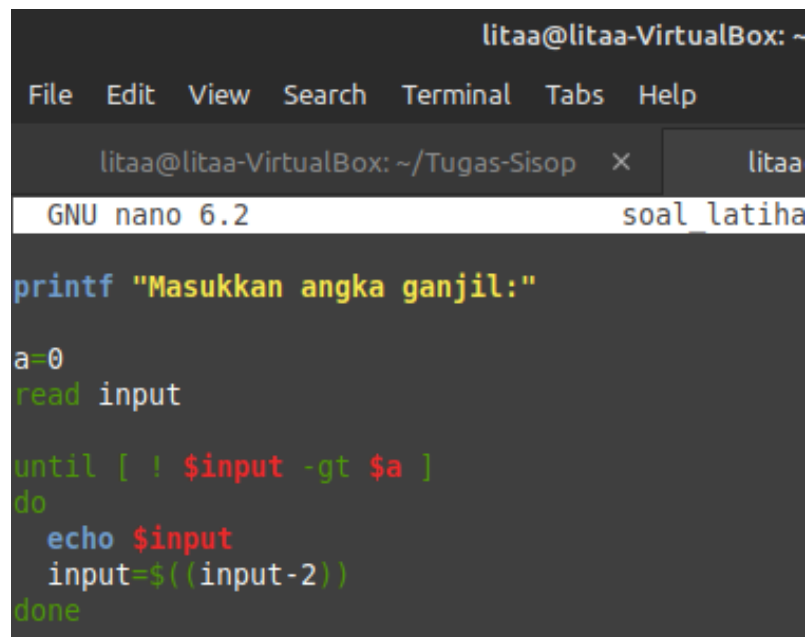
Code :

```
printf "Masukkan angka ganjil:"

a=0
read input

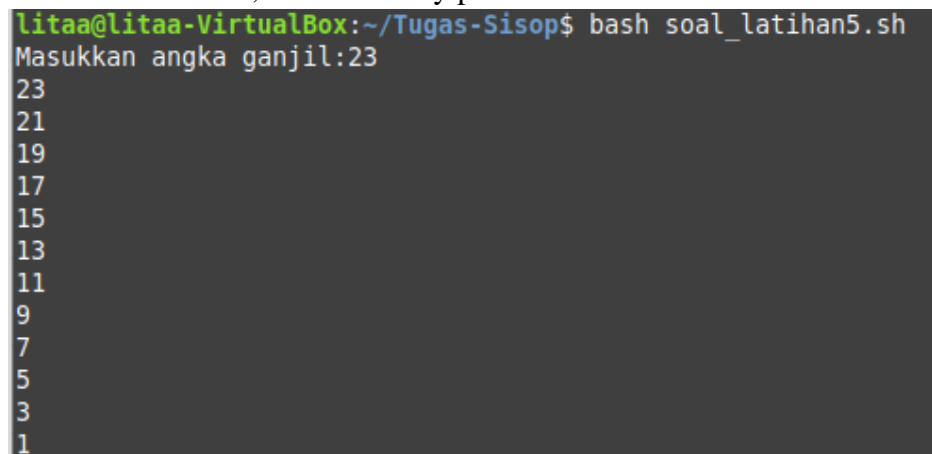
until [ ! $input -gt $a ]
do
    echo $input
    input=$((input-2))
done
```

Write the code in GNU text editor with 'nano file_name' command. The code that we trying to make here is if we input an odd number it will print the sort down to the smallest number according to other odd numbers. First, write printf "masukkan angka ganjil:" used for the command to users to enter an odd number. 'read input' is for read and automatically entering the input to the condition code. Using until loop to loop the calculate session of the number till it reach 'a' variable that has value 0. And for every input will increased by 2.



```
litaa@litaa-VirtualBox: ~  
File Edit View Search Terminal Tabs Help  
litaa@litaa-VirtualBox: ~/Tugas-Sisop x litaa  
GNU nano 6.2 soal latih  
  
printf "Masukkan angka ganjil:"  
  
a=0  
read input  
  
until [ ! $input -gt $a ]  
do  
    echo $input  
    input=$((input-2))  
done
```

To see if the code can run, use ‘bash soal_latihan5.sh’ and enter an odd number. As we entered the 23 number, it successfully print out sort of odd number to the lowest.



```
litaa@litaa-VirtualBox:~/Tugas-Sisop$ bash soal_latihan5.sh  
Masukkan angka ganjil:23  
23  
21  
19  
17  
15  
13  
11  
9  
7  
5  
3  
1
```