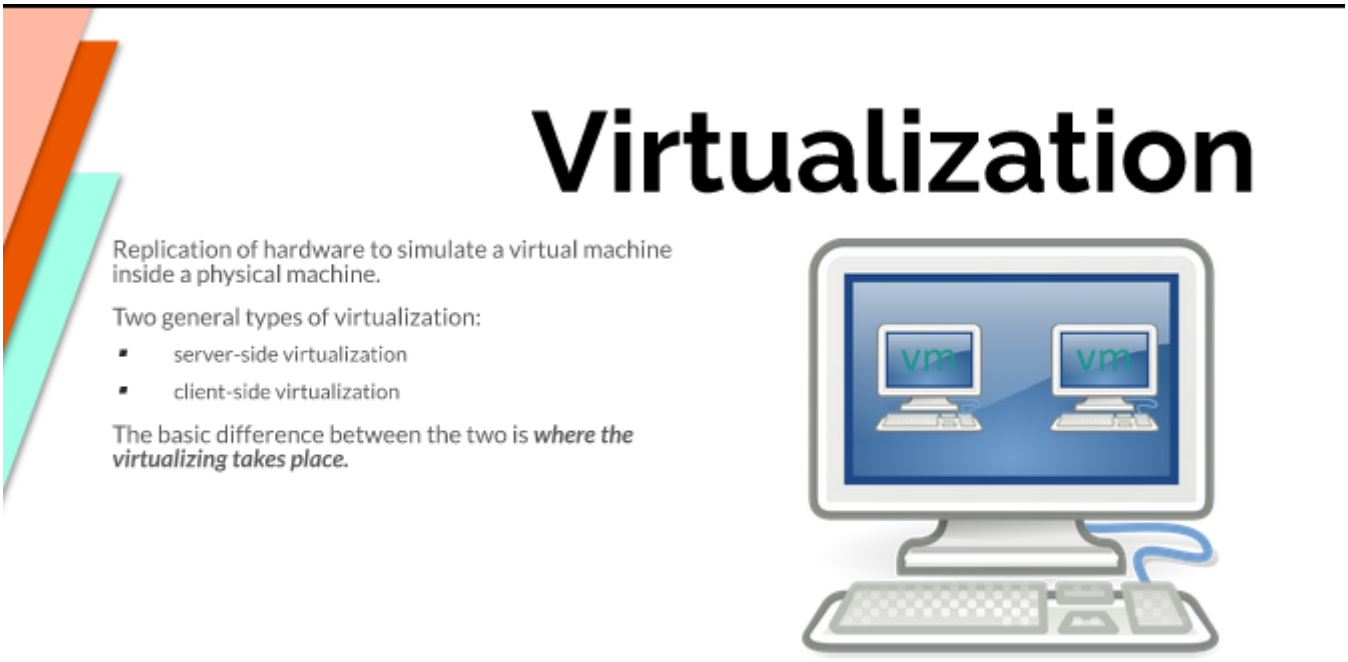
Final Notes

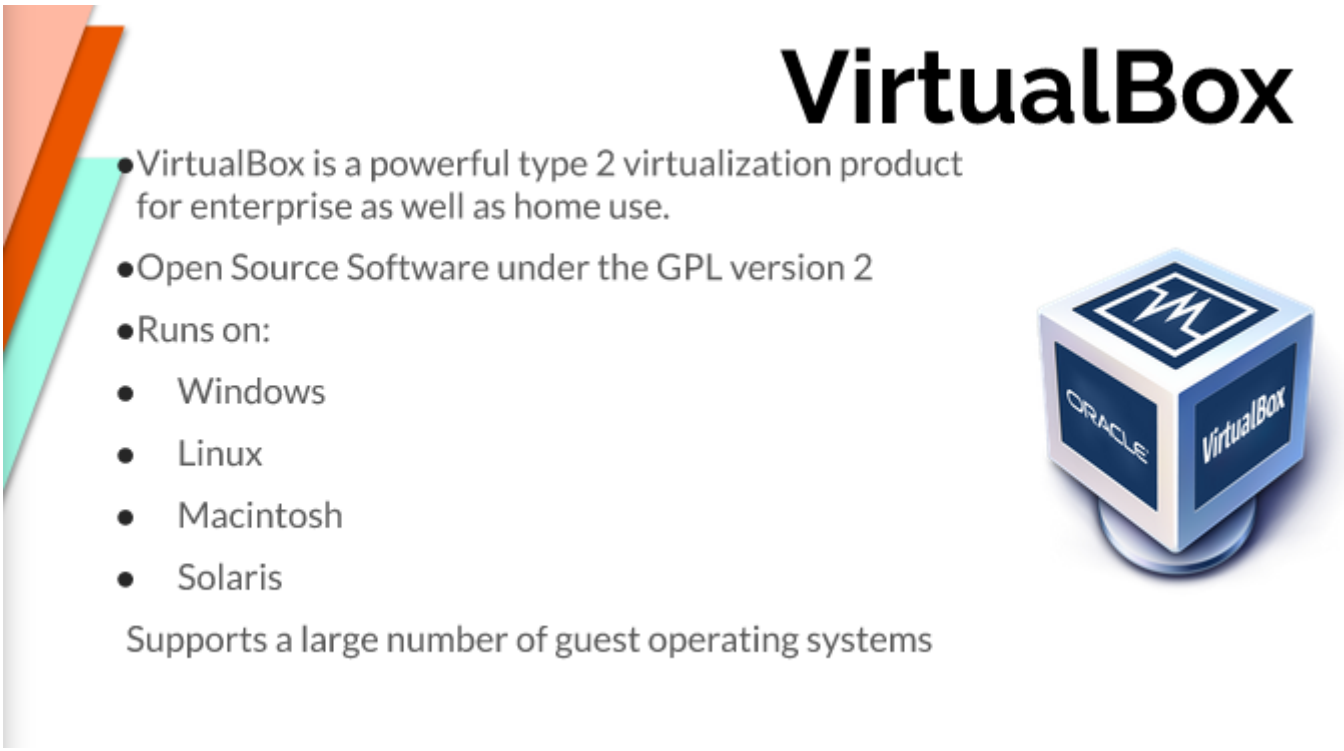
Lecture 2: Installing Ubuntu, Virtualization, and the Raspberry PI



Server-side - VDI

- Thick client or fat client
- Thin client
- Zero client

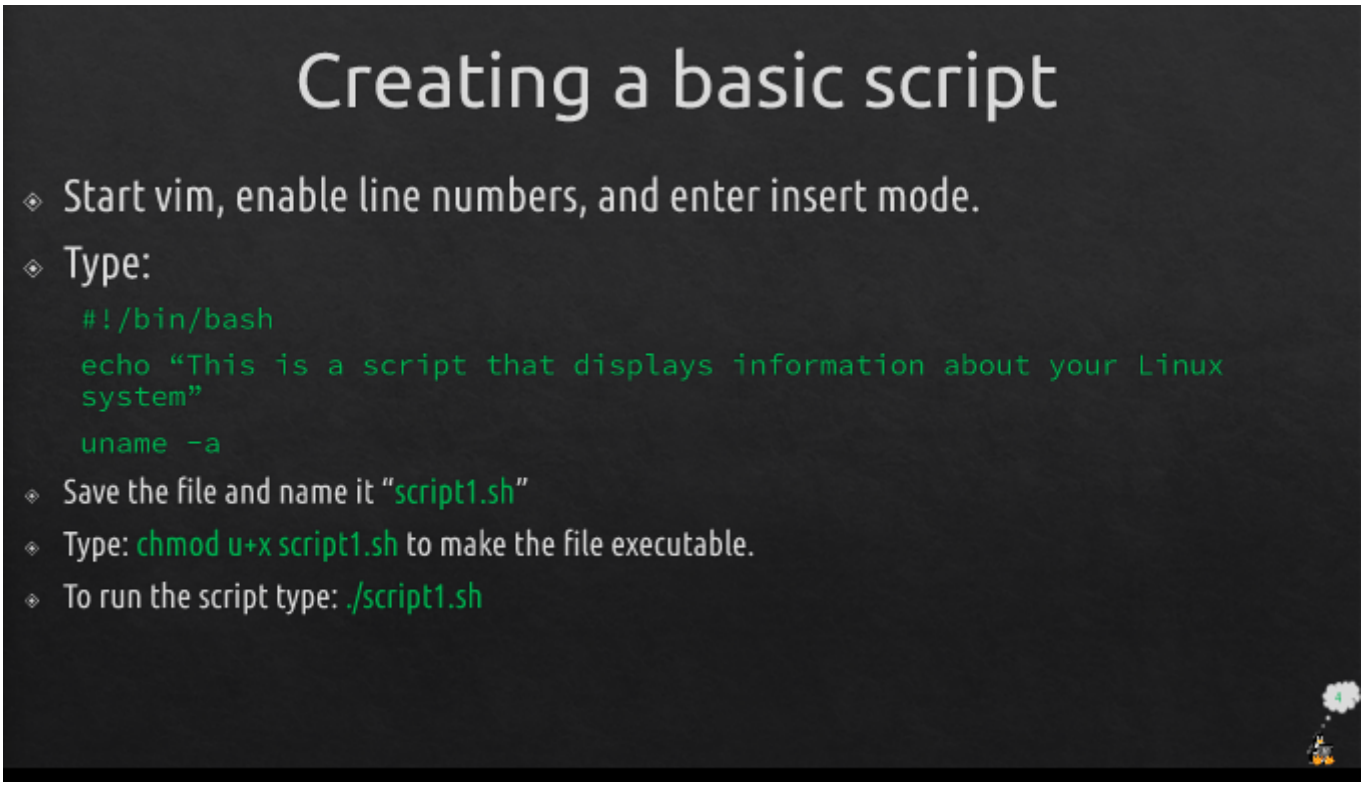
VirtualBox



Using VirtualBox

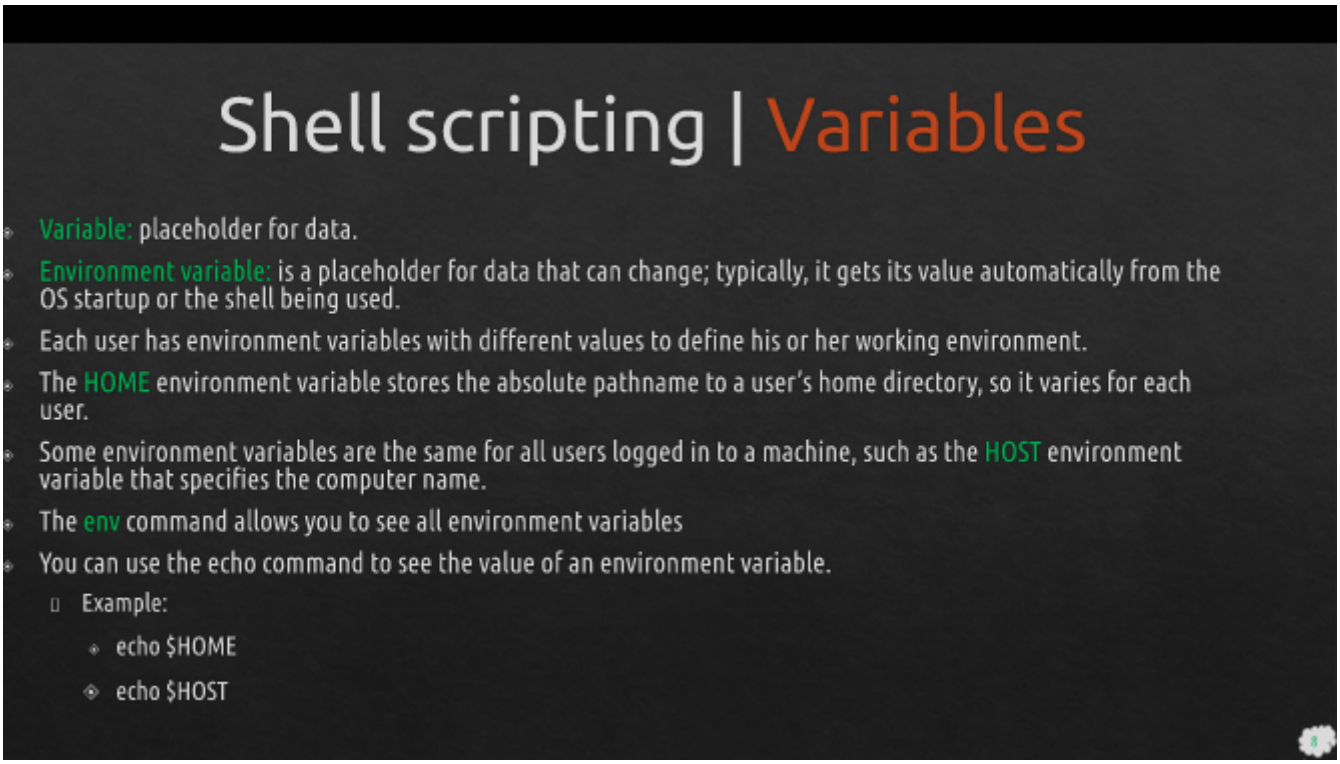
Lecture 8 | Shell scripting

Creating a basic script

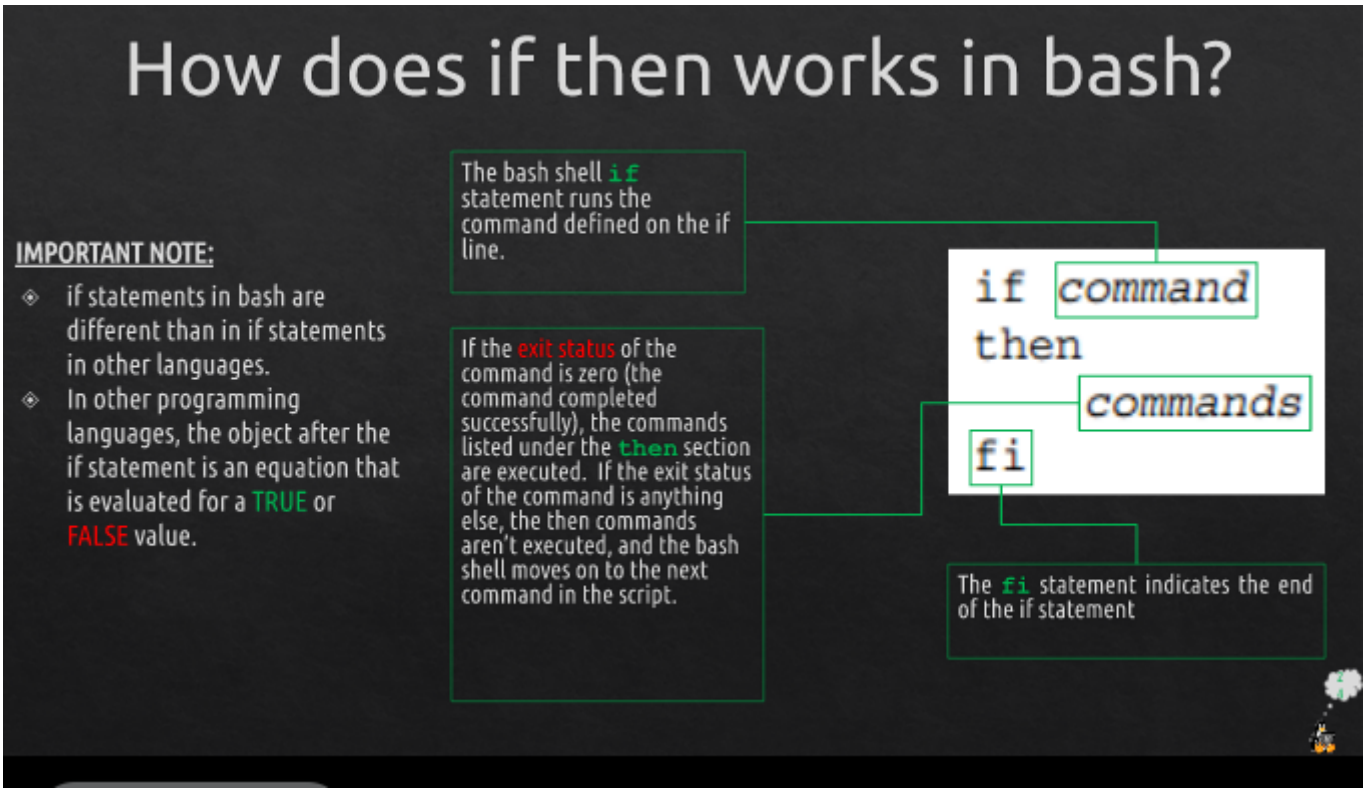


Displaying text

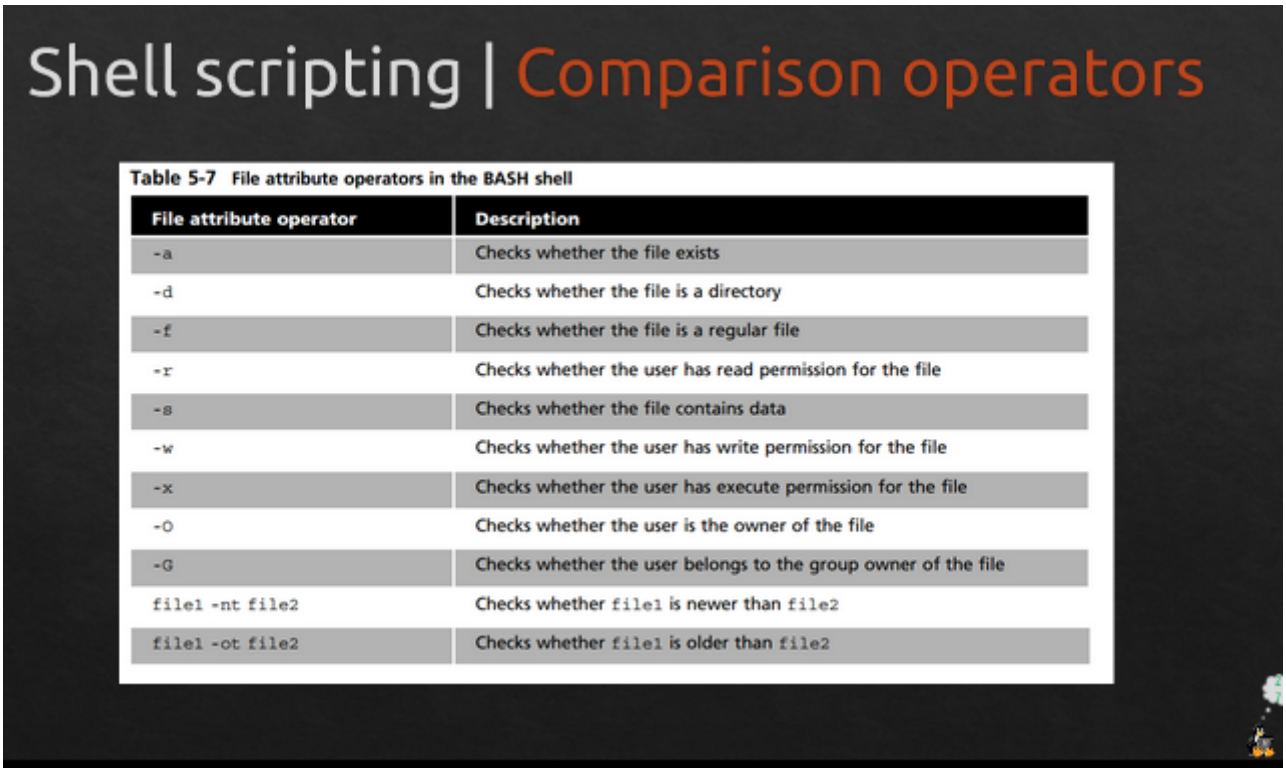
Working with variables

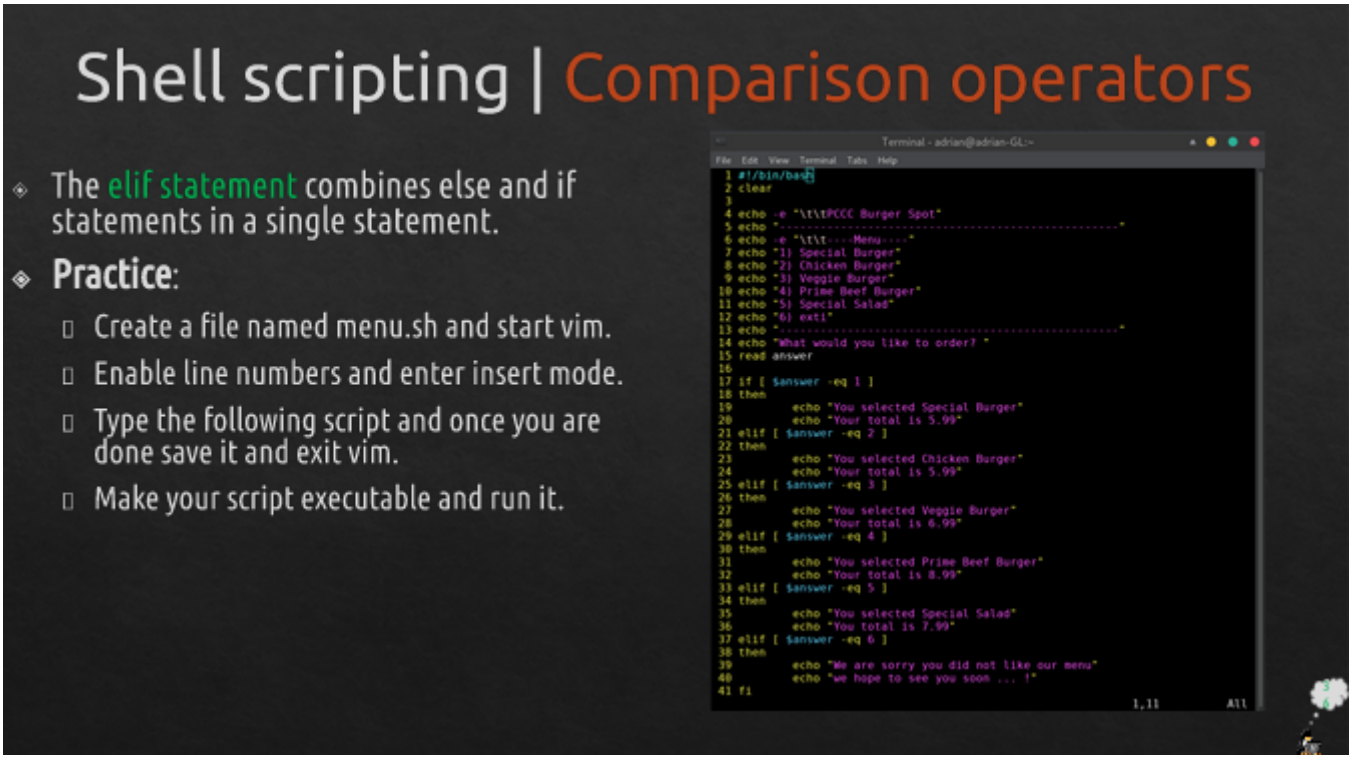


How does if then works in bash?


How does if then works in bash?
IMPORTANT NOTE:
if statements in bash are different than in if statements in other languages.
In other programming languages, the object after the if statement is an equation that is evaluated for a TRUE or FALSE value.
The bash shell if statement runs the command defined on the if line.
If the exit status of the command is zero (the command completed successfully), the commands listed under the then section are executed. If the exit status of the command is anything else, the then commands aren't executed, and the bash shell moves on to the next command in the script.
if command
then
commands
fi
The fi statement indicates the end of the if statement

Operators


Shell scripting | Comparison operators
Table 5-7 File attribute operators in the BASH shell
File attribute operator
Description
-a
Checks whether the file exists
-d
Checks whether the file is a directory
-f
Checks whether the file is a regular file
-r
Checks whether the user has read permission for the file
-s
Checks whether the file contains data
-w
Checks whether the user has write permission for the file
-x
Checks whether the user has execute permission for the file
-O
Checks whether the user is the owner of the file
-G
Checks whether the user belongs to the group owner of the file
file1 -nt file2
Checks whether file1 is newer than file2
file1 -ot file2
Checks whether file1 is older than file2


Shell scripting | Comparison operators
The elif statement combines else and if statements in a single statement.
Practice:
Create a file named menu.sh and start vim.
Enable line numbers and enter insert mode.
Type the following script and once you are done save it and exit vim.
Make your script executable and run it.
#!/bin/bash
clear
echo -e "\t\tPCCC Burger Spot"
echo "----------"
echo -e "\t\t----Menu----"
echo "1) Special Burger"
echo "2) Chicken Burger"
echo "3) Veggie Burger"
echo "4) Prime Beef Burger"
echo "5) Special Salad"
echo "6) exit"
echo "----------"
echo "What would you like to order? "
read answer
if [$answer -eq 1]
then
echo "You selected Special Burger"
echo "Your total is 5.99"
elif [$answer -eq 2]
then
echo "You selected Chicken Burger"
echo "Your total is 5.99"
elif [$answer -eq 3]
then
echo "You selected Veggie Burger"
echo "Your total is 6.99"
elif [$answer -eq 4]
then
echo "You selected Prime Beef Burger"
echo "Your total is 8.99"
elif [$answer -eq 5]
then
echo "You selected Special Salad"
echo "You total is 7.99"
elif [$answer -eq 6]
then
echo "We are sorry you did not like our menu"
echo "we hope to see you soon ... !"
fi

Looping

Shell scripting | Looping

- Looping is used to perform a set of commands repeatedly. In the menu script, the user is given a list of options to choose from, and after a selection is made, the script ends.
- Shell scripting support different types of loops:
  - while loop
  - until loop
  - for loop

```
while [ condition ]
do
        command1
        command2
        commandN
done
```

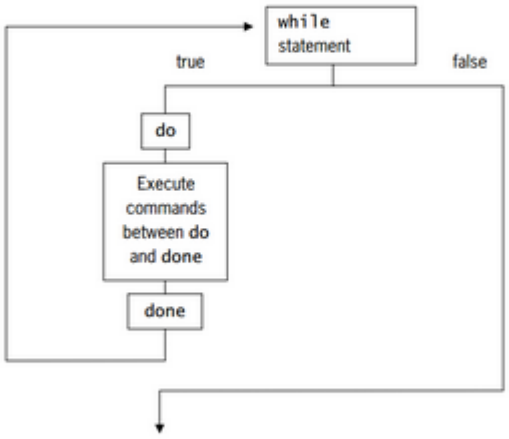


Figure 5-4 A `while` loop
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