BASH

- Bourne Again Shell
- 1989
- .sh file extension
- Starts with #! /bin/bash at start of file
- #! : known as shebang

To run a bash file in Terminal use

1. bash filename.sh
2. move to the directory of your file, then use → ./filename.sh

Chmod +x filename.sh
./filename.sh

↑ before doing this change the file permission to execute also.

» which $SHELL

↑ gives your shell type (Ex → sh, bash etc.)

» echo "Hello World"

↑ prints given thing between " ".

» sleep 2

↑ gives delay of whatever time mentioned in seconds (in this case 2 seconds)

» name = "Yash"

↑ Creating a variable name and giving it value → Yash

To use this variable in your script use → $Varname (in this case $name)

» read Varname

↑ gets user input and saves it in Varname.

{ Ex → read Age : gets user input and stores it in variable Age }

» name = $1

↑ positional Argument

When you run ./script.sh " "

↑

Whatever you pass here gets assigned to $1. and hence to variable attached with $1.

Can also use multiple positional arguments (Ex → $1, $2, $3 .....)

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» Who = $(whoami)

↑ Whoami is a command which tells you your user, running it like this runs the commands and stores it to a variable.
(in this case to 'who')

» $USER

↑ gives your user

» $PWD

↑ gives your current working directory

» $RANDOM

↑ built in variable, gives a random number between 0-32767

» $HOSTNAME

↑ gives your hostname

{ use echo with every built-in variable to see output in your terminal, just doing variable would not give anything
Ex → echo $USER }

» name = "Yash"

» $name

↑ you created a variable 'name' and assigned it value 'Yash', you can check your variable using $name

↑ and it can be used throughout your terminal, but still not in your scripts because its not permanent and gets deleted everytime you reboot or re-login.

» export name

↑ now its kind of permanent and can be used systemwide in any script, until you reboot your machine or relogin to your terminal

To make it permanent forever you need to edit the .bashrc file.

edit the .bashrc file (its in your home dir)
Add line:

export name = "Yash"

Save and exit, its for forever now!

» echo $((2+3))

↑

doing math using terminal

Can do all arithmetic operations as you do in any other language

+ → Addition
- → Subtraction
/ → division (no remainder)
* → multiplication
** → power
%. → division (gives remainder)

» echo $((RANDOM %.10))

↑

gives a random number between 0-9.

%.20 → 0-19
%.30 → 0-29
etc.

→ Conditional Statements

» if [[condition]] ; then

— Code —

else

— Code —

fi

» if [[ ]]; then

— Code —

elif [[ ]] ; then

— Code —

else

— Code —

fi

» nested loop

if [[ ]]; then

— Code —

if [[ ]]; then

— Code —

else

— Code —

fi