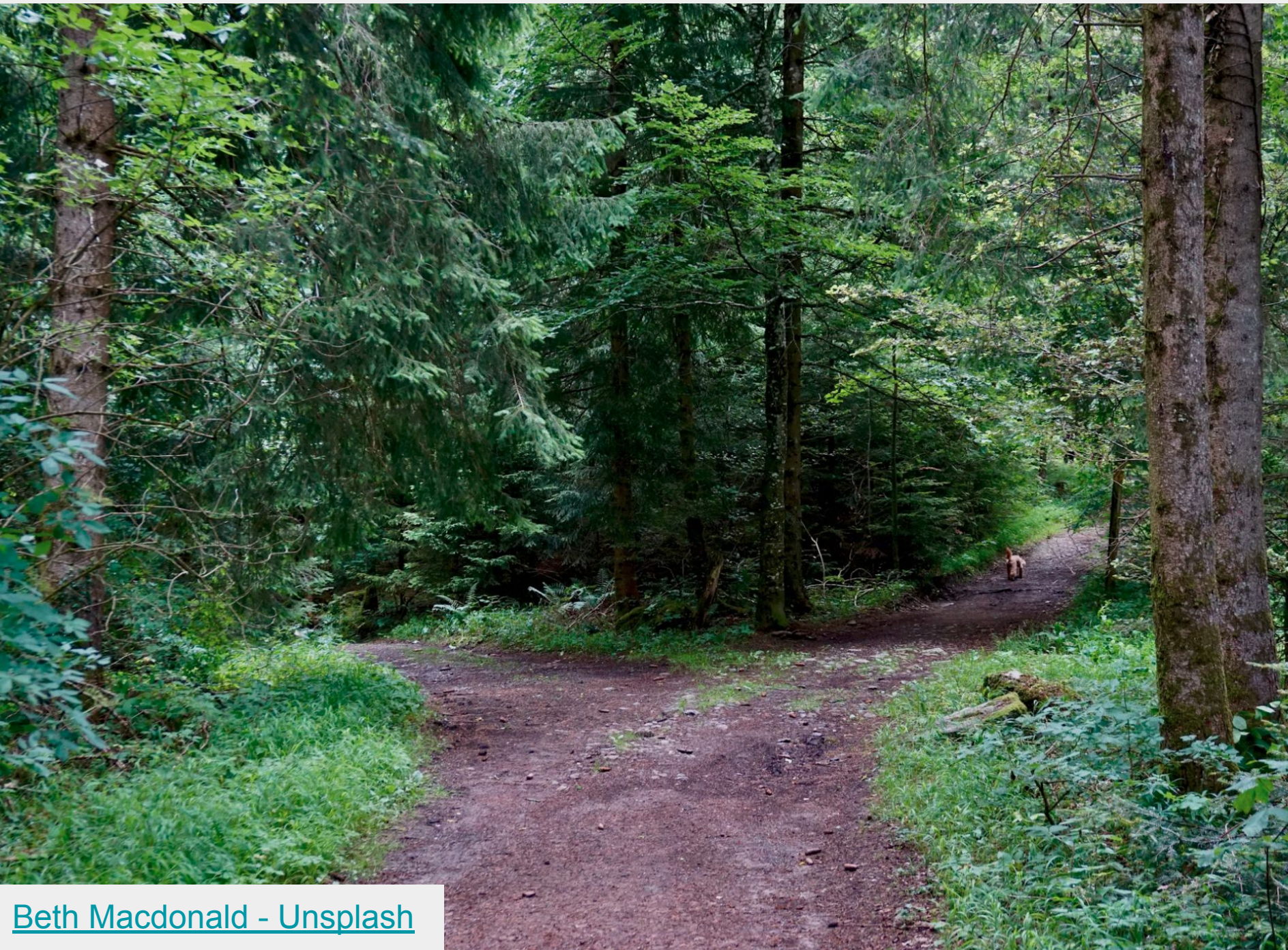
bash scripting – conditionals

Adapted from materials by Dr. Carrier



Beth Macdonald - Unsplash

if

if

General form:

```
if CONDITION
then
   # do stuff
fi
```

if

General form:

```
if CONDITION
then
  # do stuff
fi
```

Alternatively:

```
if CONDITION ; then
  # do stuff
fi
```

What are our conditions?

What do you think this does?

What are our conditions?

What do you think this does?

```
if [ $1 -lt 10 ]
then
   # do stuff
fi
```

What are our conditions?

Don’t worry about memorizing these:

https://ryanstutorials.net/bash-scripting-tutorial/bash-if-statements.php

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Operator	Description
! EXPRESSION	The EXPRESSION is false.
-n STRING	The length of STRING is greater than zero.
-z STRING	The lengh of STRING is zero (ie it is empty).
STRING1 = STRING2	STRING1 is equal to STRING2
STRING1 != STRING2	STRING1 is not equal to STRING2
INTEGER1 -eq INTEGER2	INTEGER1 is numerically equal to INTEGER2
INTEGER1 -gt INTEGER2	INTEGER1 is numerically greater than INTEGER2
INTEGER1 -lt INTEGER2	INTEGER1 is numerically less than INTEGER2
-d FILE	FILE exists and is a directory.
-e FILE	FILE exists.
-r FILE	FILE exists and the read permission is granted.
-s FILE	FILE exists and it's size is greater than zero (ie. it is not empty).
-w FILE	FILE exists and the write permission is granted.
-x FILE	FILE exists and the execute permission is granted.

An alternative - arithmetic expansion

```
if (( $1 < 10 ))
then
   # do stuff
fi
```

What are we missing?

```
if CONDITION
then
  # do stuff
fi
```

What are we missing?

```
if CONDITION
then
   # do stuff
elif ANOTHER_CONDITION
then
   # do other stuff
fi
```

What are we missing?

```
if CONDITION
then
   # do stuff
elif ANOTHER_CONDITION
then
   # do other stuff
else
   # even more stuff
fi
```

Boolean operators

```
if [ $1 -lt 10 ] && [$1 -gt 0 ]
then
   # do stuff
fi


if [ -z $2 ] || [$2 = “start” ]
then
   # do stuff
fi
```