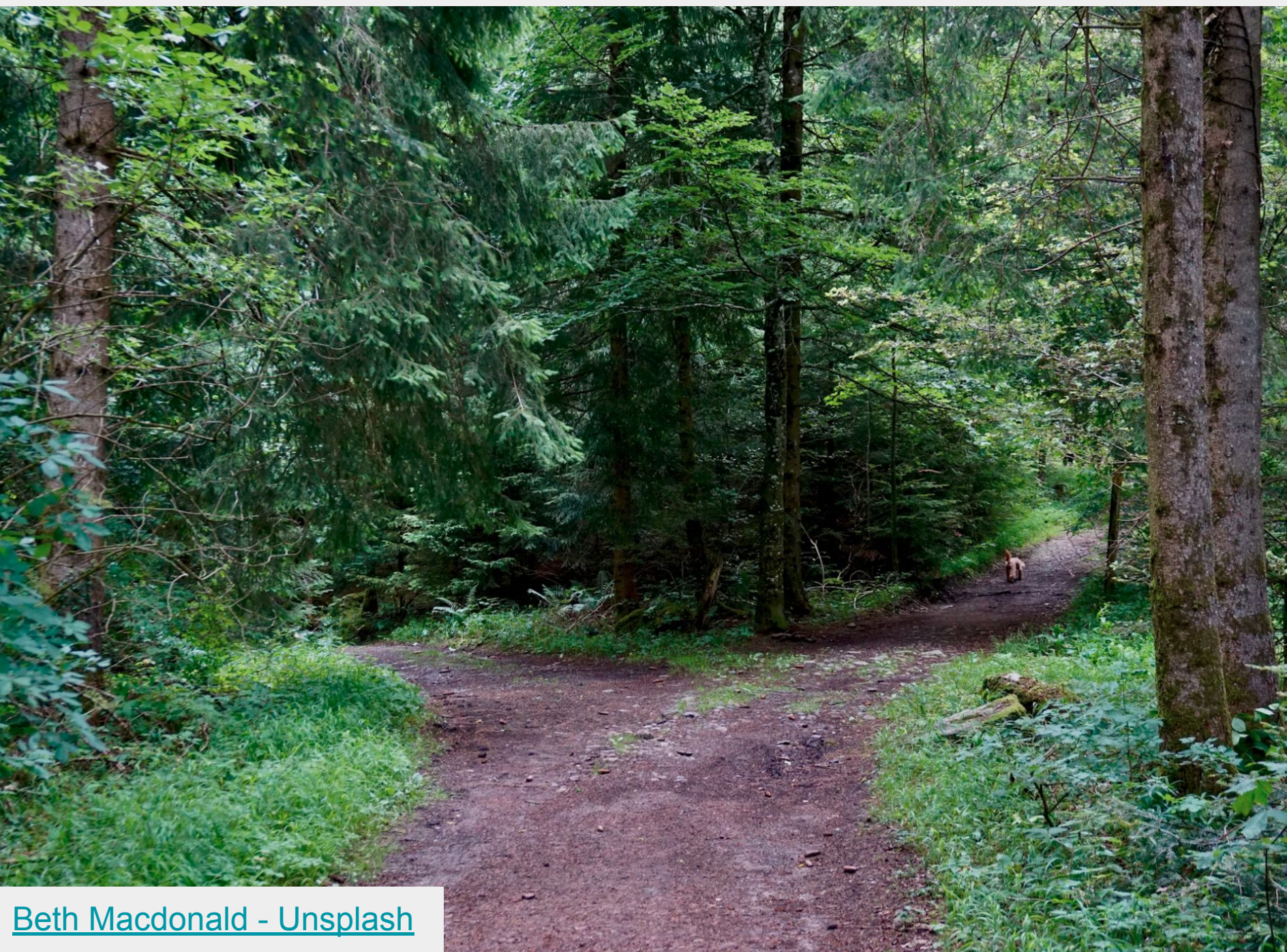


# bash scripting – conditionals

Adapted from materials by Dr. Carrier





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



# What are our conditions?

Don't worry about memorizing these:

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

Can also run `man test`

# 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
```