

Common Errors In KTurtle

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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16 January 2013



Learning Objectives



Learning Objectives

We will learn about



Learning Objectives

We will learn about

- ▶ **Syntax errors**



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- ▶ **Syntax errors**
- ▶ **Runtime errors**



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We will learn about

- ▶ **Syntax errors**
- ▶ **Runtime errors**
- ▶ **Logical errors**



System Requirement



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- **Ubuntu Linux OS v 12.04**



System Requirement

- ▶ **Ubuntu Linux OS v 12.04**
- ▶ **KTurtle v 0.8.1 beta**



Pre-requisites



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- ▶ **Basic working knowledge of KTurtle**



Pre-requisites

- ▶ **Basic working knowledge of KTurtle**
- ▶ **for relevant tutorials, please visit our website**
<http://spoken-tutorial.org>



Definition Of Error



Definition Of Error

Error is a



Definition Of Error

Error is a

- ▶ **mistake in a program that produces an incorrect or unexpected result**



Syntax Errors



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Syntax error is a

- ▶ violation of **grammatical** rules of a programming language



Syntax Errors

Syntax error is a

- ▶ violation of **grammatical** rules of a programming language
- ▶ **Compilation** fails when a program has syntax errors



Syntax Errors

Syntax error is a

- ▶ violation of **grammatical** rules of a programming language
- ▶ **Compilation** fails when a program has syntax errors
- ▶ Syntax errors are easy to **find and fix**



Examples Of Syntax Errors



Examples Of Syntax Errors

- ▶ Unmatched parentheses, square and curly braces



Examples Of Syntax Errors

- ▶ Unmatched parentheses, square and curly braces
- ▶ Use of variable that has not been declared



Examples Of Syntax Errors

- ▶ Unmatched **parentheses**, **square** and **curly braces**
- ▶ Use of **variable** that has not been declared
- ▶ Missing quotes in **strings**



Runtime Errors



Runtime Errors

- ▶ **Runtime error** occurs during the execution of a program



Runtime Errors

- ▶ **Runtime error** occurs during the execution of a program
- ▶ It may crash the **program** when you run it



Runtime Errors

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- ▶ It may crash the **program** when you run it
- ▶ Runtime errors are commonly due to **wrong input** from the user



Runtime Errors

- ▶ **Runtime error** occurs during the execution of a program
- ▶ It may crash the **program** when you run it
- ▶ Runtime errors are commonly due to **wrong input** from the user
- ▶ **Compiler** cannot find these errors



Examples Of Runtime Errors



Examples Of Runtime Errors

- ▶ Trying to divide by a **variable** that contains no value



Examples Of Runtime Errors

- ▶ Trying to divide by a **variable** that contains no value
- ▶ Run a loop without a **terminating** condition or **increment** value



Logical Errors



Logical Errors

Logical error is a



Logical Errors

Logical error is a

- ▶ **mistake in a program's source code that results in incorrect or unexpected behavior**



Logical Errors

Logical error is a

- ▶ mistake in a program's **source code** that results in **incorrect** or **unexpected behavior**
- ▶ **Assigning** a value to a wrong **variable**



Logical Errors

Logical error is a

- ▶ mistake in a program's **source code** that results in **incorrect** or **unexpected behavior**
- ▶ **Assigning** a value to a wrong **variable**
- ▶ **Multiplying** two numbers instead of adding



Summary



Summary

Errors and types of errors such as



Summary

Errors and types of errors such as

- ▶ Use of **variable** that has not been declared



Summary

Errors and types of errors such as

- ▶ Use of **variable** that has not been declared
- ▶ Missing quotes in **strings**



Summary

Errors and types of errors such as

- ▶ Use of **variable** that has not been declared
- ▶ Missing quotes in **strings**
- ▶ **Runtime errors**



Summary

Errors and types of errors such as

- ▶ Use of **variable** that has not been declared
- ▶ Missing quotes in **strings**
- ▶ **Runtime errors**
- ▶ **Logical errors**



Assignment



Assignment

```
reset
```

```
$x=3
```

```
$y=3
```

```
if $x==$y
```

```
print "they are equal"
```

```
else
```

```
{
```

```
print "they are not equal"
```

```
}
```



Assignment



Assignment

program to find the nth term and sum of
n terms in GP

reset

\$x=ask "enter value for x and click Ok"

\$y=ask "enter value for y and click Ok"

\$g =sqrt (\$x*\$y)

print "Geometric mean is ="



Assignment



Assignment

```
reset  
learn sum $x {  
  {$r=0  
  for $i= 1 to $x{  
    return $r}  
  }  
print
```



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project



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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ Conducts workshops using spoken tutorials
- ▶ Gives certificates to those who pass an online test
- ▶ For more details, please write to contact@spoken-tutorial.org



Acknowledgements

- ▶ **Spoken Tutorial Project is a part of the Talk to a Teacher project**
- ▶ **It is supported by the National Mission on Education through ICT, MHRD, Government of India**
- ▶ **More information on this Mission is available at <http://spoken-tutorial.org/NMEICT-Intro>**

