

An Introduction to Visual Basic .NET (Chapter 1)

Intro

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Programmers

Program

Directions given to a computer.

Programmers

People who write programs

Successful programmers are analytical thinkers. They are able to approach a problem in many different ways and identify the strengths and weaknesses of each approach. Patience, strong writing and communication skills, and the ability to work well in a team.

History of Programming Languages

Machine Languages

00110110 10110110

Assembly Languages

**Mnemonics, abbreviations
for instructions, (MUL a1,
ax), ADD**

High-level Languages

grossPay=hours * rate

High-level Languages

Visual Basic .NET, Java, C#, C/C++

Interpreter

Line by line converts high-level code to machine code

Compiler

translates entire program into machine code before running

Procedure-Oriented programming

Concentrates on major tasks

Object-Oriented programming

Focused on the objects used to accomplish its goal

OOP Terminology

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OOP

Top-Down vs. OOD

Top-Down used to plan procedure-oriented programs

OOD used to plan OOP

Object

can be seen or touched

can contain attributes & methods

Attribute

A watch (Object) has several attributes, such as crown, dial, hour hand, minute hand, and movement

Also called properties

Method

A watch(Object) keeps track of time

Class

blueprint used to create an ob-

OOP (Continued)

ject

Class

Encapsulates

contains

Instance

Kevin is an instance of Person

Abstraction

Hide the complex details to the users of the object

Hidden & Exposed

Only allow the user access to what they need

Inheritance

Create one class from another

Derived Class

inherits from base class

Base Class

attributes and methods shared by it's "children"

Polymorphism

same instruction to be carried out differently depending on the object

A dog makeNoise() would

Class (Continued)

**bark, while a cow makeNoise()
would moo**

Visual Studio .NET

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Starting Microsoft Visual Studio .NET

See Text pages 7 - 29