

Computer Science

KEHS

It's Your Future

- Considerations:
 - Choose a career with a good job outlook.
 - Match your aptitudes to a career choice that you would enjoy.
 - Get adequate pay.



Career Opportunities

- Skills you learn at Kennewick High in Computer Science could lead to a job as a:
 - Computer Programmer
 - Software Engineer
 - Computer Technician
 - Network Analyst
 - Web Master

What field has 5 of the top 10 highest paid, fastest growth occupations? And has a severe shortage of graduates?

That's right, Computer Science!!!

Computer Science / Programming

- What is it?
 - We are NOT graphics designers.
 - We write computer code that solves a problem.
- How would I know if I would be a good programmer?
 - Do you enjoy solving problems?
 - Do you like a challenge?



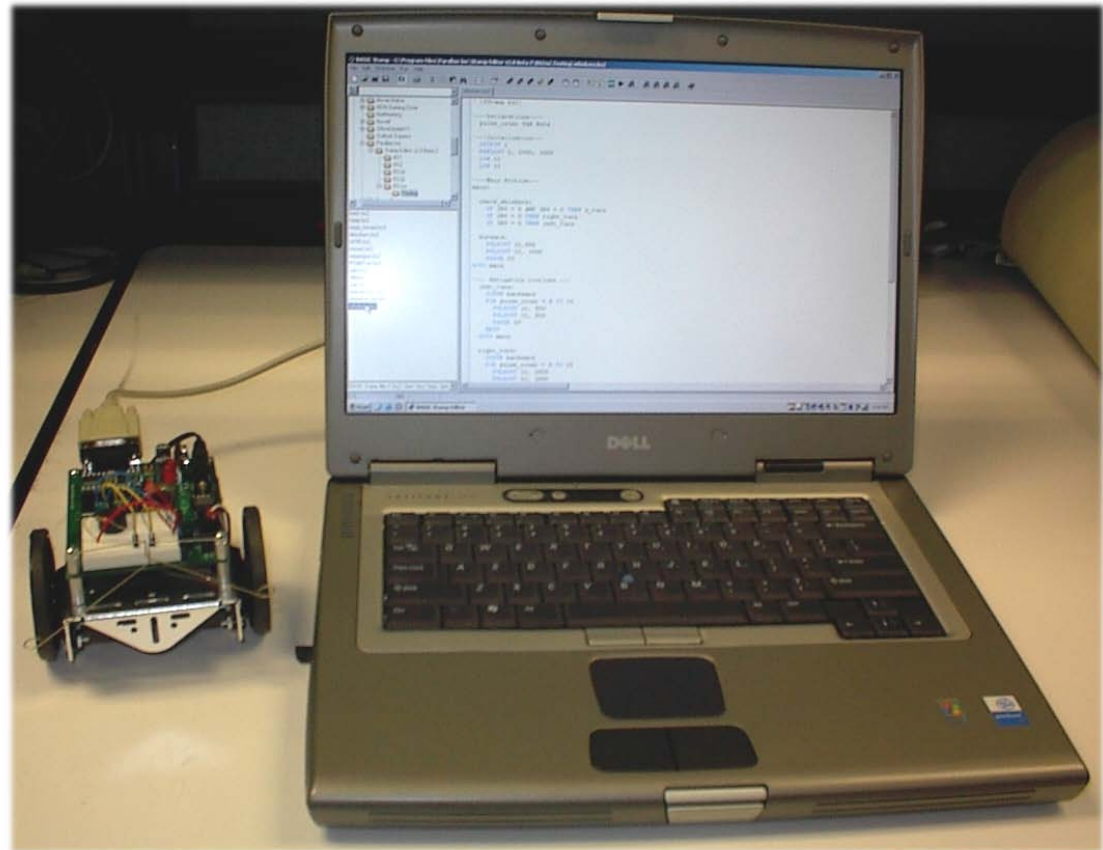
Principles of CS (Gamemaker)

- Games we code:
 - Evil Clutches
 - Galactic Mail
 - Lazaruth



Principles of CS (Sumo Robotics)

```
Inc\Stamp Editor v2.0 Beta 2\B52sx\Testing\whiskers.bs2
whiskers.bs2
' {$Stamp bs2}
'---Declarations---
pulse_count VAR Byte
'---Initalization---
OUTPUT 2
FREQOUT 2, 2000, 3000
LOW 12
LOW 13
'---Main Routine---
main:
check_whiskers:
  IF IN6 = 0 AND IN4 = 0 THEN u_turn
  IF IN6 = 0 THEN right_turn
  IF IN4 = 0 THEN left_turn
forward:
  PULSOUT 12,500
  PULSOUT 13, 1000
  PAUSE 20
GOTO main
'--- Navigation routines ---
left_turn:
  GOSUB backward
  FOR pulse_count = 0 TO 35
    PULSOUT 12, 500
    PULSOUT 13, 500
    PAUSE 20
  NEXT
  GOTO main
right_turn:
  GOSUB backward
  FOR pulse_count = 0 TO 35
    PULSOUT 12, 1000
    PULSOUT 13, 1000
```



Visual Basic .Net (CS 1&2)

```
Public Class frmMillionaire
```

```
Private Sub btnCalculate_Click
```

```
Dim balance As Double,  
numYears As Integer
```

```
balance = Cdbl(txtAmount.Text)
```

```
Do While balance < 1000000
```

```
    balance += 0.06 * balance
```

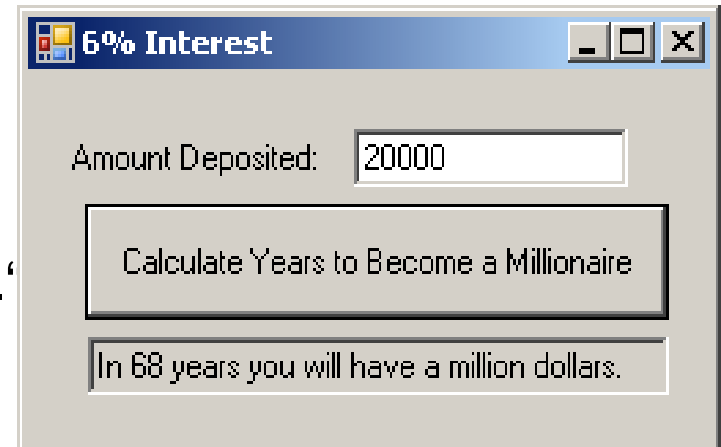
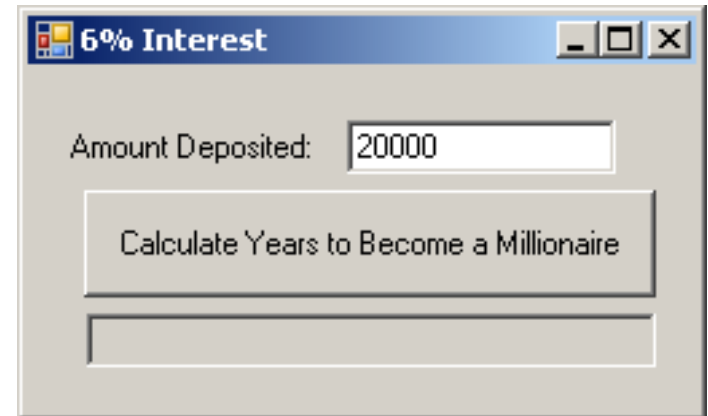
```
    numYears += 1
```

```
Loop
```

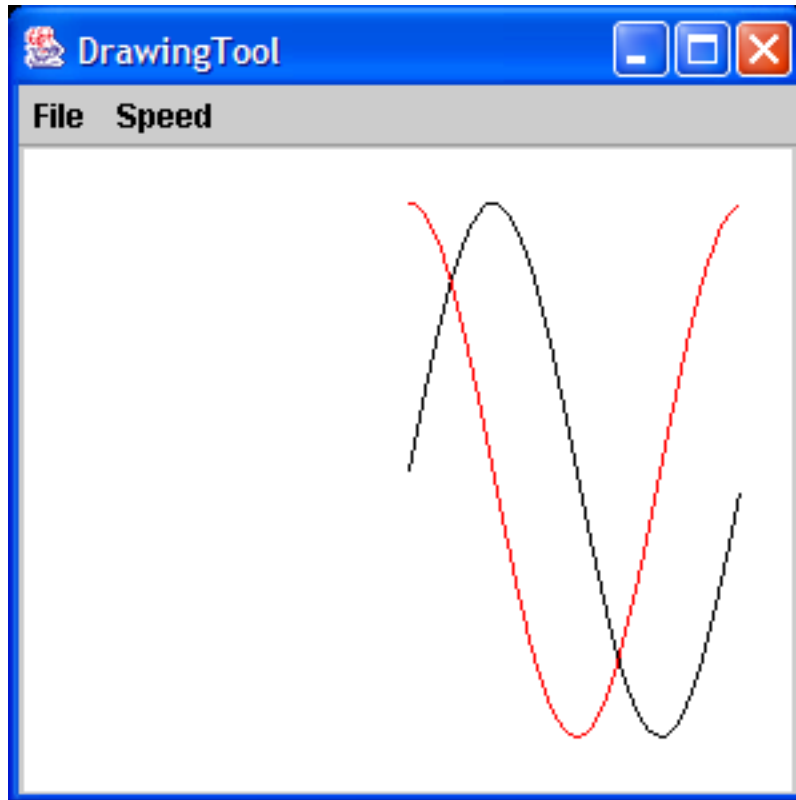
```
txtWhen.Text = "In " & numYears & "  
" years you will have a million dollars."
```

```
End Sub
```

```
End Class
```



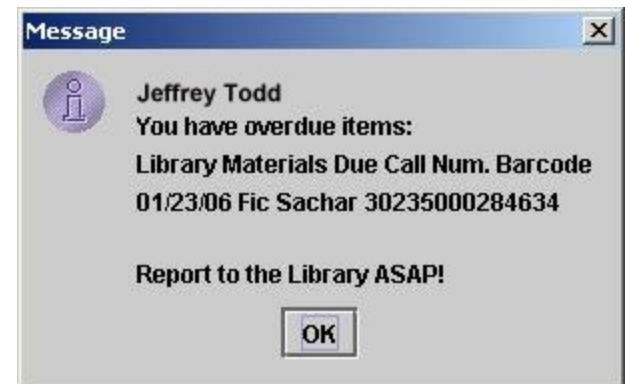
Programming in Java (CS 3&4)



```
17  */
18  public static void main(String[] args)
19  {
20      DrawingTool pencil;
21      SketchPad paper;
22
23      paper = new SketchPad(300, 300);
24      pencil = new DrawingTool(paper);
25      double radius = 100;
26      double x;
27
28      for (double rad = 0; rad <= 3.14*2; rad +=.1)
29      {
30          x = (Math.sin(rad)) * radius;
31          pencil.move(rad*20,x);
32      }
33      pencil.setColor(Color.red);
34      pencil.up();
35      pencil.move (0,Math.cos(0)*radius);
36      pencil.down();
37      for (double rad = 0; rad <= 3.14*2; rad +=.1)
38      {
39          x = (Math.cos(rad)) * radius;
40          pencil.move(rad * 20, x);
41      }
42  }
43
44  }
```

Past Student Programming Projects

- Network Chatting (IM)
- Screen Savers
- MP3 Player
- Password Protections
- **Library Fines** →
- Snake Game
- Survey Programs
- Sumo Robotics



PC TroubleShooting

- Students learn to install:

- Memory
- Motherboards
- Drives
- Network drivers
- Video drivers
- Sound drivers
- Set the CMOS
- CPUs
- And More!!!



A+ Certification Skills

PC Technician Skills

PC Internship Responsibilities

- PC Technical Skills
- PC Maintenance
- Computer Imaging
- Server Experience
- Network Administration



Service Skills

- Students learn to share their knowledge with teachers.
- Students must log each service call.



Networking+

- Students learn to:
 - punch network patch panels
 - use high-tech testing equipment to identify wiring issues
 - create network cables
 - learn how networks work



Options for a 1st CS Course

- 0.5 Credits of Math
 - Principles of Computer Science (currently being approved)
 - Computer Science 1 & 2 (Visual Basic)
- Computer Competency Credit
 - Computer Science 1 & 2 (Visual Basic)
- Tech Prep Credit with CBC
 - PC Trouble Shooting