

CISC 1600/1610
Computer Science I

Practice problems

Professor Daniel Leeds
dleeds@fordham.edu
JMH 328A

Spreadsheet: 2 students, 4 homeworks

Grade: 0-100, -1 means not-yet-entered

Program:

- (Initialize spreadsheet)
- Display spreadsheet
- Enter grades
- Display spreadsheet after each entry
- If both students have same grade, report "same grade!"

```

1 2
1 -1 -1
2 -1 -1
3 -1 -1
4 -1 -1
Enter student and hw number: 1 2
Enter grade: 95
1 2
1 -1 -1
2 95 -1
3 -1 -1
4 -1 -1
Enter student and hw number:

```

```

1 2
1 -1 -1
2 95 -1
3 -1 -1
4 -1 -1
Enter student and hw number: 2 2
Enter grade: 95
1 2
1 -1 -1
2 95 95
3 -1 -1
4 -1 -1
Same grade for hw 2!
Enter student and hw number:

```

```

float myFunc(float b);

int main()
{
    float a,b;
    b=2.5; a=4.1;
    a=myFunc(b);
    cout << b << " " << a << endl;
    return 0;
}

float myFunc(float b)
{
    b*=2;
    return b+4;
}

```

```

int main()
{
    int a=5;
    for(int i=1; i<=5; i++)
    {
        cout << a << endl;
        a-=i;
    }
    return 0;
}

```

Classes

```

class Thing
{
public:
    int size;
    void grow();
}

// double Thing's size
void ???grow()
{
    ??
}

int main()
{
    Thing A, B;
    A.size=5; B.size=3;
    A.grow();
    cout << A.size;
    return 0;
}

```

Robots playing soccer

- Conditional actions


```
if(nextTo(ball) && facing(goal)
    kickForward(ball);
```
- Repeated motions:


```
while(!nextTo(ball))
    move-legs-forward();
```
- Blocks of code:


```
bool nextTo(ball) {
    return distanceTo(ball)<threshold;
}
```