CISC 1600/1610
Computer Science I

Practice problems

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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:

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;
}

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:

int main()
{
    int a=5;
    for(int i=1; i<=5; i++)
    {
        cout << a << endl;
        a-=i;
    }
    return 0;
}
class Thing
{
public:
    int size;
    void grow();
}

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

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

Robots playing soccer

- Conditional actions
  if(nextTo(ball) & & facing(goal)
      kickForward(ball);
- Repeated motions:
  while(!nextTo(ball))
      moveLegsForward();
- Blocks of code:
  bool nextTo(ball) {
      return distanceTo(ball)<threshold;
  }