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10/03/2013

Web Programming Fundamentals

Problem Solving Assignment

5 Step Problem Solving

1. Define the Problem
2. Break the problem apart
3. Identify potential solutions
4. Evaluate each potential solution
5. Choose a solution and develop a plan to implement it.

**Problem 1:**

**A Cat, a Parrot, and a Bag of Seed:**

A Cat, a Parrot, and a Bag of Seed: A man finds himself on a riverbank with a cat, a parrot and a bag of seed. He needs to transport all three to the other side of the river in his boat. However, the boat has room for only the man himself and one other item (either the cat parrot or seed). In his absence, the cat could eat the parrot, and the parrot would eat the bag of seed. Show how he can get all the passengers to the other side, without leaving the wrong ones alone together.

**5 Step Problem Solving**

1. Define the Problem

A man needs to get three things across the river on his boat that only has space for himself and 2 of his 3 items: a Cat, a Parrot, and a bag of seed. However, he cannot leave the bag of seed with the parrot or the parrot with the cat alone. The problem is how will this man do this without leaving either pair alone with one another. At first it seems that this would be an impossible issue. I even considered that perhaps it would be okay that the parrot could eat the bag of seed, but ultimately found that would not solve the problem, but was actually a part of it. The overall goal is to get these 3 items across the river without leaving them alone with one another.

1. Break the problem apart

The constraints are the following:

1. There are 3 items with only 2 spaces available
2. Parrot and Seed can’t be left together
3. Cat and Parrot can’t be left together
4. Identify potential solutions

Potential solutions could be giving the

1. Evaluate each potential solution
2. Choose a solution and develop a plan to implement it.