Exam 2 Review

Authentication

Public-Key Infrastructure(PKI)

* Goal of authentication: bind identity to card/token/password/key

- Public key infrastructure: bind identity to public key  
– Crucial as people will use key to communicate with principal whose identity is bound to key  
– Erroneous binding means no secrecy between principals  
– Assume principal identified by an acceptable name – called Common Name

* A PKI consists of:
  + Certificates
  + Certificates Authority(CA)
* What is a trust
* Password authentication:
  + What is sources? Why we use sources
* Kerberos system
  + What is the responsibility of each server
  + What is
* Dfbdj

II. OS Security

III. Software Security

* What is the cost of the problem how to solve it
* Injection attactk
* Different type of injection attack
* Risk condition: time of change

Software Security

* Stack Overflow
  + Dj

**Problem Set 2**

* Due date:

**Problem 2.1 [20 points]**

For each of the following, give a PEAS description of the task environment -- in a grid as in Figure 2.5 of R&N -- and characterize it in terms of the properties described in Section 2.3.2 of R&N, putting your answers to the that part in a grid as in Figure 2.6 of R&N.

* Exploring the subsurface oceans of Titan
* Shopping for used AI books on the Internet

| **Agent Type** | **Performance Measure** | **Enviroment** | **Actuators** | **Sensors** |
| --- | --- | --- | --- | --- |
| Exploring the subsurface oceans of Titan | Materials analysis, mapping | Oceans of Titan | devices capable of exploring and collect data | Sensors, camera, sonar |
| Shopping for used AI books on the Internet | Price, Book's quality | Online market | customer action | Purchase orders, book's information |

| **Task Environment** | **Observable** | **Agents** | **Deterministic** | **Episodic** | **Static** | **Discrete** |
| --- | --- | --- | --- | --- | --- | --- |
| Exploring the subsurface oceans of Titan | Fully | Multi | Deterministic | Episodic | Static | Discrete |
| Shopping for used AI books on the Internet | Partially | Single | Stochastic | Sequential | Dynamic | Discrete |

**Problem 2.2 [10 points]**

* A = {Suck, Left, Right} => |A| = 3
* P = {Clean, Dirty} => |P| = 2
* The total number of S/R agents for this problem is 3^2 = 9

| **Perception** | **Action** |
| --- | --- |
| Clean | Right |
| Clean | Left |
|  |  |
| Clean | Right |
| Clean | Right |
|  |  |
| Clean | Left |
| Clean | Left |
|  |  |
| Dirty | Suck |
| Clean | Right |
|  |  |
| Clean | Right |
| Dirty | Suck |
|  |  |
| Clean | Left |
| Dirty | Suck |
|  |  |
| Dirty | Suck |
| Clean | Left |
|  |  |
| Dirty | Suck |
| Dirty | Suck |

* S/R agent is a agent that only use the current percept to make decision.

**Problem 2.3 [10 points]**

Draw a state machine capturing the behavior of the sphex wasp described on page 41 of R&N.