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## Amazon Interview Experience | Set 160 (For SDE 2)

- Difficulty Level : \n[Hard](#)
- Last Updated : \n18 Dec, 2014

Amazon sde2 experience:

### Telephonic round :

Design a site similar to jungle.com. Assume you are given a crawler, design a distributed system , what ds will you use , some basic api's etc.

### Onsite:

#### coding round 1:

1. zig zag traversal of binary tree  $O(n)$  algo

2. matrix question:

given matrix like :

```
a b e d
b c f e
a b d d
\xe2\x80\xa6
```

find the longest path of consecutive alphabets given a starting alphabet. You can move in all 8 directions. for eg. a->b(right)->c(down)->d(diagonal down)\xe2\x80\xa6 len = 4 , find max such len

#### coding round 2:

1. is binary tree balanced :  $O(n)$  time algo

2. given a pre and post order kind of a traversal (2 arrays) create an n-ary tree out of it with struct of the form :

```
\r\n\r\nstruct node {\r\n    int data;\r\n    struct node *child[MAX];\r\n    int child_num;\r\n}
```

did it using a hash table of linked lists and storing parents . Might be a btr way not sure.

### design round + hiring mgr 3:

Design the most recently viewed item for amazon , say 15 most recently viewed item which are scrollable for millions of products and users . scalable and extensible model. give apis , distributed systems, caching , reduce latency : critical

#### design round 4:

1. Give Object oriented design for the snake game (that was in old nokia phones) . only class and obj diag was needed, no code/implementation. it should have extensibility to accomodate different types of fruits, (eg one gives + 5 len + 10 pts) it should be scalable to diff platforms

2. Give an architecture diagram with all entities and relationships of a multi user wysiwyg editor . basically a web interface to multiple authors who can edit and store their docs . multiple ppl should be able to save it at once . also ownership should be present for documents.

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