

# TUGAS ASPRAK

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Kelas : IF-03-01

## 1. Struct and Stack

```
#include <stdio.h>

struct Node {
    struct Node* link;
    char alphabet;
};

int main() {
    struct Node l1, l2, l3, l4, l5, l6, l7, l8, l9;
    l1.link = NULL;
    l1.alphabet = 'F';

    l2.link = NULL;
    l2.alphabet = 'M';

    l3.link = NULL;
    l3.alphabet = 'A';

    l4.link = NULL;
    l4.alphabet = 'I';

    l5.link = NULL;
    l5.alphabet = 'K';

    l6.link = NULL;
    l6.alphabet = 'T';

    l7.link = NULL;
    l7.alphabet = 'N';

    l8.link = NULL;
```

```

18.alphabet = 'O';

19.link = NULL;
19.alphabet = 'R';

17.link = &l1; //N -> F
11.link = &l8; //F -> O
18.link = &l2; //O -> M
12.link = &l5; //M -> K
15.link = &l3; //K -> A
13.link = &l6; //A -> T
16.link = &l9; //T -> R
19.link = &l4; //R -> I
14.link = &l7; //I -> N

char word[] = {
    13.link->link->link->alphabet,
    13.link->link->link->link->alphabet,
    13.link->link->link->link->link->alphabet,
    13.link->link->link->link->link->link->alphabet,
    13.link->link->alphabet,
    13.link->link->link->link->link->link->link->alphabet,
    13.link->link->link->link->link->link->link->link->link->link->alphabet,
    13.link->link->link->link->link->link->link->link->link->link->link->alphabet,
    13.link->link->link->alphabet,
    13.link->link->link->link->link->link->link->link->alphabet,
    13.link->link->link->link->link->link->link->link->link->link->alphabet
};

printf("%s", word);

return 0;
}

```

Output :

```

PS C:\Users\diamo\Documen
{ .\strctandstack }
INFORMATIKA
PS C:\Users\diamo\Documen

```

Penjelasan :

### 1. Struct Node:

- struct Node adalah struktur data yang merepresentasikan simpul dalam linked list.
- Terdiri dari dua variabel:
  - link: Pointer ke simpul berikutnya dalam linked list.
  - alphabet: Karakter yang disimpan dalam simpul.

### 2. Inisialisasi Simpul:

- Dibuat sembilan simpul (l1 hingga l9) dengan karakter-karakter yang membentuk kata "INFORMATIKA".
- Setiap simpul memiliki pointer link yang awalnya diatur ke NULL.

## 2. HackerRank

```
#include <stdio.h>

int main() {
    long long int c, i, g, m, n, x, la, lb;
    long long int a[100010], b[100010];
    scanf("%lld", &g);
    while (g--) {
        la = lb = 0;
        scanf("%lld%lld%lld", &n, &m, &x);
        scanf("%lld", &a[1]);
        for (i = 1; ++i <= n;) {
            scanf("%lld", &a[i]);
            a[i] += a[i - 1];
        }
        scanf("%lld", &b[1]);
        for (i = 1; ++i <= m;) {
            scanf("%lld", &b[i]);
            b[i] += b[i - 1];
        }
        la = 1;
        while (la <= n && a[la] <= x)
            la++;
        la--;
    }
}
```

```

c = la;
lb = 1;
while (lb <= m && b[lb] <= x) {
    if (la && b[lb] + a[la] > x)
        la--;
    else {
        if (c < la + lb)
            c = la + lb;
        lb++;
    }
}
printf("%lld\n", c);
}
return 0;
}

```

Output :

The screenshot shows the HackerRank interface for the 'Game of Two Stacks' challenge. At the top, a green banner reads 'Congratulations' and 'You solved this challenge. Would you like to challenge your friends?'. Below this, a sidebar on the left lists test cases 0 through 6, all marked as passed. The main area displays the 'Compiler Message' as 'Success'. It also shows the 'Input (stdin)' and 'Expected Output' for the test case.

**Input (stdin):**

1	1
2	5 4 10
3	4 2 4 6 1
4	2 1 8 5

**Expected Output:**

1	4
---	---

The bottom of the screen shows the Windows taskbar with the time 9:25 PM on 4/2/2024.