Linked Lists 練習

- 使用串列印出 1~6
- 將 5 移至串列開頭

Linked Lists 練習

- 串列型態設定

```
typedef struct listNode* listPtr;
typedef struct listNode {
    int data;
    listPtr link;
};
```

Linked Lists 練習

```
listPtr firstNode = NULL;
listPtr temp = NULL;
```

設定串列開頭

```
firstNode = (listPtr) malloc (sizeof(listPtr));
firstNode -> data = 1;
firstNode -> link = NULL;
temp = firstNode;
```

新增節點

```
int i;
for (i = 0; i < 5; i ++) {
    listPtr newNode = NULL;
    newNode = (listPtr) malloc (sizeof (listPtr));

    newNode -> data = i + 2;
    newNode -> link = NULL;
    temp -> link = newNode;

    temp = newNode;
}
```

Linked Lists 練習

- 將 5 移至串列開頭

```
temp = firstNode;
for (; temp; temp = temp -> link) {
    if (temp -> link -> data == 5) {
        listPtr orgNode = firstNode;
        firstNode = temp -> link;
        temp -> link = temp -> link -> link;

        firstNode -> link = orgNode;

        break;
    }
}
```

Linked Lists 練習

- 印出串列

```
void print_list (listPtr first)
{
     printf ("\n");
     for (; first; first = first -> link) {
          printf ("\t%d", first -> data);
     }
     printf ("\n");
}
```