

# Lesson 7 Lab

Task 1: To define a **program** to print your machine pointer size

```
#include <stdio.h>

int main()
{
    int *p = 0;
    printf("%d", sizeof(p));
}
```

Task 2: To define a program to read an integer from user, using a pointer

[Hint 1: besides of the integer (n), you need to define a pointer to integer (p)]

[Hint 2: in your scanf(), only p got shown, NOT n]

```
#include <stdio.h>

int main()
{
    int n = 0;
    int *p = &n;
    scanf("%d", p);
    printf("%d", n);
}
```

Task 3: define a program with an int variable (n) and a pointer (p) points to n, and then print the value and the address of n, using p

[Hint 1: in your printf(), only p got shown, NOT n]

[Hint 2: you may decide what's the value in n]

```
#include <stdio.h>

int main()
{
    int n = 0;
    int *p = &n;
```

```
printf("%d\n%d", *p, p);
}
```

Task 4: To define a program which holds an integer array, called data, with initial values as {11, 12, 13}, with a pointer points to data[0]; use the pointer to updates data[1] to 60, and print data[1] using the pointer

[Hint: it's your choice whether move the pointer or not, either way works]

```
#include <stdio.h>

int main() {
    int data[] = {11, 12, 13};
    int *p = &data[0];

    *(p + 1) = 60;
    printf("%d\n", *(p + 1));

    return 0;
}
```

Task 5: To define a program which reads in a string from user, and then print it with the third char got replaced by '?'

Example: (no need to put in or print the double quos)

```
input:    "hello"
output:   "he?lo"
```

[Hint: you should use a char[], not a pointer. Consider why is it]

```
#include <stdio.h>

int main() {
    char data[100] = "";
    scanf("%s", data);
    data[2] = '?';
    printf("%s", data);
}
```

```
    return 0;  
}
```