# 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;  } |