

# Assignment 1

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## Exercise 00: vc\_print\_alphabet

| Turn-in files     | vc_print_alphabet.c |
|-------------------|---------------------|
| Allowed functions | putchar             |

- Create a function that displays the alphabet in lowercase, on a single line, by ascending order, starting from a letter 'a'
- Function prototype: `void vc_print_alphabet(void);`

## Exercise 01: vc\_print\_reverse\_alphabet

| Turn-in files     | vc_print_reverse_alphabet.c |
|-------------------|-----------------------------|
| Allowed functions | putchar                     |

- Create a function that displays the alphabet in lowercase, on a single line, by descending order, starting from the letter 'z'.
- Function prototype: `void vc_print_reverse_alphabet(void);`

## Exercise 02: vc\_print\_numbers

| Turn-in files     | vc_print_numbers.c |
|-------------------|--------------------|
| Allowed functions | putchar            |

- Create a function that displays all digits, on a single line, by ascending order.
- Function prototype: `void vc_print_numbers(void);`

## Exercise 03: vc\_is\_negative

| Turn-in files     | vc_is_negative.c |
|-------------------|------------------|
| Allowed functions | putchar          |

- Create a function that displays 'N' or 'P' depending on the integer's sign entered as a parameter. If n is negative, display 'N'. If n is positive or null, display 'P'.
- Function prototype: `void vc_is_negative(int n);`

## Exercise 04: vc\_print\_comb

| Turn-in files | vc_print_comb.c |
|---------------|-----------------|
|---------------|-----------------|

| Turn-in files     | vc_print_comb.c |
|-------------------|-----------------|
| Allowed functions | putchar         |

- Create a function that displays all different combinations of three different digits in ascending order, listed by ascending order - yes, repetition is voluntary.
- Here's the intended output:

```
$ ./your_program | cat -e
012, 013, 014, 015, 016, 017, ..., 789$
```

- 987 isn't there because 789 already is.
- 999 isn't there because the digit 9 is present more than once.
- reference: `man cat`
- Function prototype: `void vc_print_comb(void);`

## Exercise 05: vc\_print\_comb2

| Turn-in files     | vc_print_comb2.c |
|-------------------|------------------|
| Allowed functions | putchar          |

- Create a function that displays all different combinations of two digits between 00 and 99, listed by ascending order.
- Here's the intended output:

```
$ ./your_program | cat -e
00 01, 00 02, 00 03, 00 04, 00 55, ..., 00 99, 01 02, ..., 97 99, 98 99$
```

- Function prototype: `void vc_print_comb2(void);`

## Exercise 06: vc\_putnbr

| Turn-in files     | vc_putnbr.c |
|-------------------|-------------|
| Allowed functions | putchar     |

- Create a function that displays the number entered as a parameter. The function has to be able to display all possible values within an `int` type variable.
- Function prototype: `void vc_putnbr(int nb);`
- For example: `vc_putnbr(88)` displays "88"

## Exercise 07: vc\_print\_combn

|                   |                  |
|-------------------|------------------|
| Turn-in files     | vc_print_combn.c |
| Allowed functions | putchar          |

- Create a function that displays all different combinations of **n** numbers by ascending order.
- n will be so that :  $0 < n < 10$
- If  $n = 2$ , here's the expected output:

```
$ ./your_program | cat -c
01, 02, 03, ..., 09, 12, ..., 79, 89$
```

- Function prototype: `void vc_print_combn(int n);`