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1. What are the advantages of using flowchart?

* ADVANTAGES OF FLOWCHART *

- Easy to make
- Communication become effective and easy to understand.
- Mistakes can be easily identified.
- Analysis become effective.
- synthesis becomes effectual.
- Debugging becomes possible.
- Logics can be easily interpreted.

2. What are the limitations of using flowchart?

* LIMITATIONS *

- Flowchart are very time consuming and laborious to draw with proper symbols and spacing, especially for large complex programs.
- Owing to the symbol-string nature of flowing charting any changes or modifications in the program logic will usually require a complete new flowchart.

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- There are no standards determining the amount of detail that should be included in the flowchart.

3. Enumerate some applications in using flowchart.

* WHEN TO USE A FLOWCHART *

- To develop understanding of how a process is done.
- To study a process for improvement.
- To communicate to others how a process is done.
- When better communication is needed between people involve with the same process.
- To document process.
- When planning a project.

4. Enumerate flowchart symbols with its name and meaning.

* SYMBOL *	* NAME *	* FUNCTION *
	start/end	An oval represents start or endpoint

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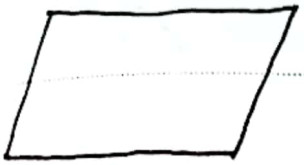
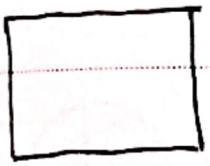
ARROW

A line is a connector that shows relationships between the representative shapes.



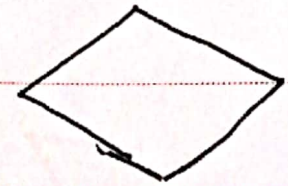
INPUT / OUTPUT

A parallelogram represents input or output.



PROCESS

A rectangle represents a process



DECISION

A diamond indicates a decision

CONNECTOR SYMBOL

Indicates that the flow continues where a matching symbol. (containing the same letter) has been placed.

MERGE

Indicates a step where two or more sub-lists or sub-process become one.

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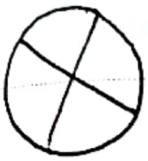
DOCUMENT

A printed document or report

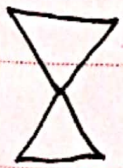


SUMMONING JUNCTION

Indicates a point in the flowchart where multiple branches converge back into a single process.

OR

Indicates the process flow continue in more than two branches

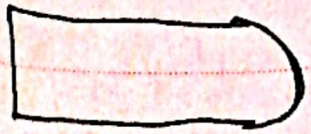


COLLATE

Indicates a step that orders information into a standard format

SORT

Indicates a step that organizes a list of items into a sequence or sets based on some predetermined criteria.



DELAY

Indicates a delay in the process

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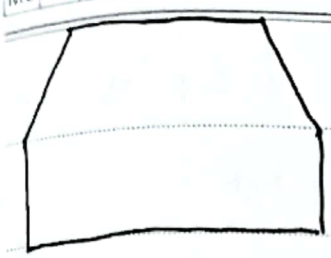
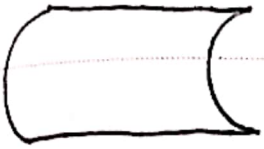


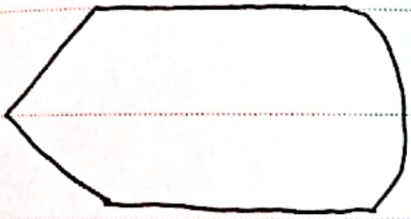
LOOP LIMIT

Indicates the point at which a loop should stop.



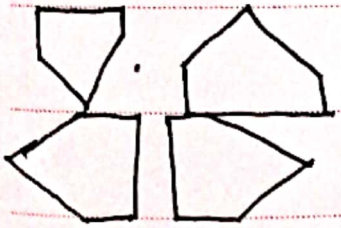
DATA STORAGE
or
STORED DATA

Indicates a step where data gets stored



DISPLAY

Indicates a step that displays information



OFF

Indicates that the process continues off page.

5. Give example problem and write an algorithm and flowchart.

Example # 1: Determine and Output Whether Number N is even or Odd

- Step 1: Read number N.
- Step 2: Set reminder as N modulo 2.

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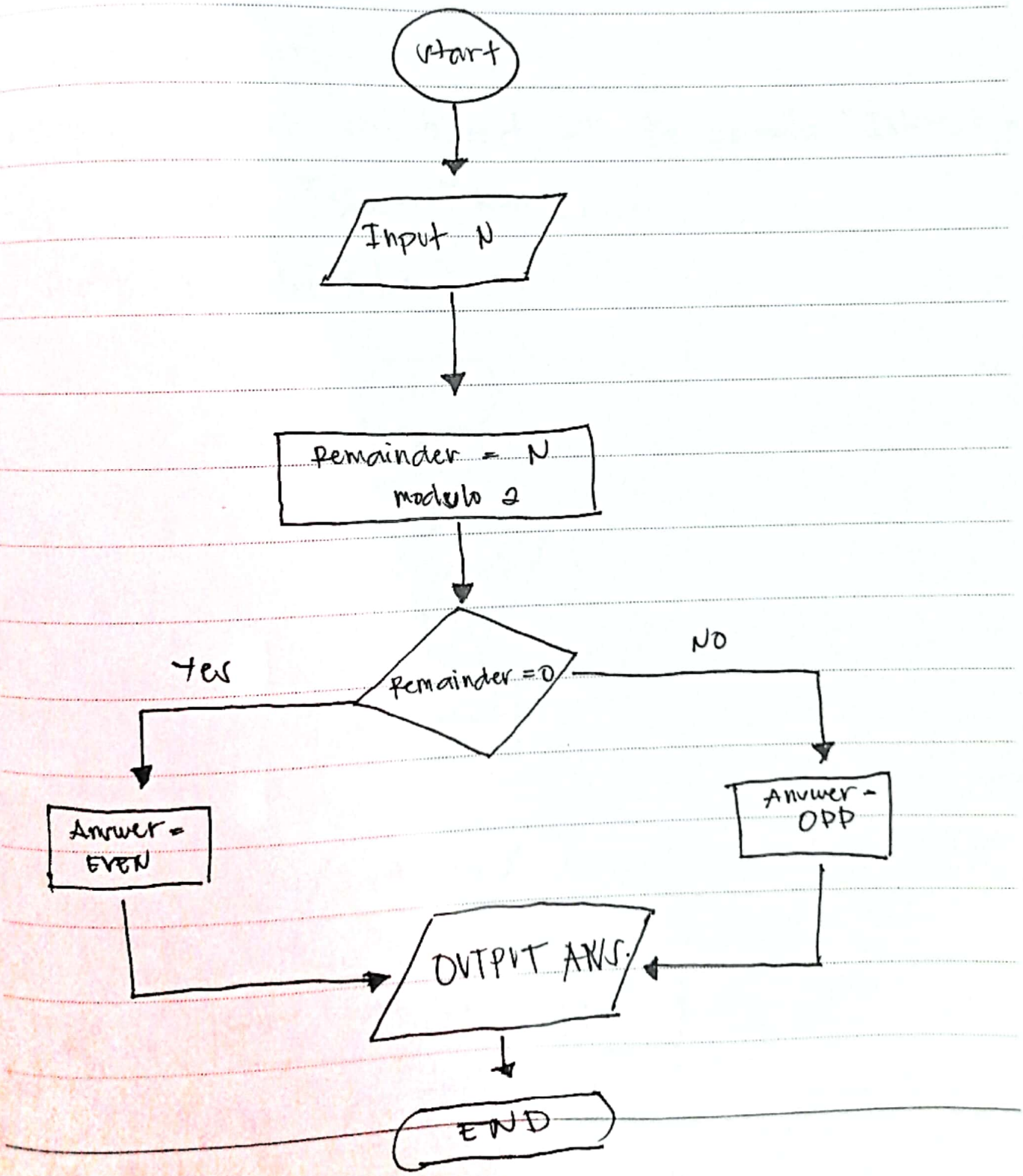
- Step 3 : If the remainder is equal to 0 then N is even, else number N is odd.
- Step 4 : Print output.



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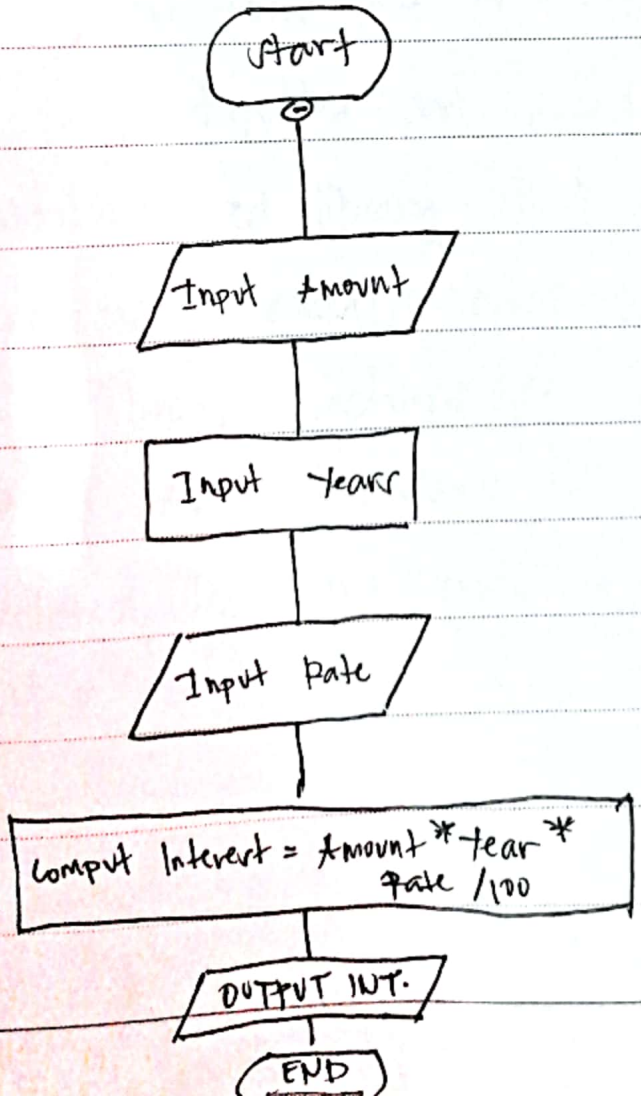
Example #2: Calculate the interest of a Bank Deposit

- Step 1: Read amount.
- Step 2: Read years.
- Step 3: Read rate.
- Step 4: Calculate the interest with the formula "Interest = Amount * Years * Rate / 100.
- Step 5: Print interest.



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6. What are programming languages influenced by C program?

- The development of various languages has been influenced by C language. There are ; C++ C also known a C with classes), C#, Python, Java, JavaScript, Perl, PHP, Verilog, D, Limbo and C shell of Unix etc.

7. What is the use of C library functions?

- Library functions are built-in functions that are group together and placed in a common location called library. Each function here performs a specific operation. We can use this library functions to get the pre-defined output. All C standard library functions are declared by using many header files.

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8. What are C library functions?

- C standard library functions or simply functions are inbuilt functions in C programming. The prototype and data defenitaions are present in their respective header files. To we these function we need to include the header file in our program.

9. Provide a list of built in functions to each C library functions?

* FUNCTION *	* SYSTEM INCLUDE FILE *	* FUNCTION PROTOTYPE *	* DESCRIPTION *
ABORT	<stdlib.h>	void abort (void);	stop the program abnormally
	<string.h	• strcat()	concantenates two string
		• strcmp()	compare two strings

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*<ctype.h>

- isalnum() = checks alphanumeric character
- isalpha() = checks whether a char. is an alpha.

*<math.h>

- acos() = computes arc cosine
- acosh() = computes arc hyperbolic cosine

*<float.h>

- s = sign (+/-)
- p = precision, the number of base-b digits in the significand.

*<time.h>

- size_t = unsigned integral type and result of the size of keyboard.
- clock_t = a type suitable for storing the processor time

10. List of all keywords in C programming.

- auto
- break
- case
- else
- enum
- extern
- long
- register
- return
- switch
- typedef
- union

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- char
- const
- continue
- default
- do
- double
- float
- for
- goto
- if
- int
- short
- signed
- sizeof
- static
- struct
- unsigned
- void
- volatile
- while
- _Packed

11. Bare on the research, provide your understanding on the topic.

* Bared on the research, I am very intrigued to explove C computer language. This program is so well degine that I can't believe it is made by a human. Now I know what truly a genius is. It give me a wake up call that knowledge is endless and there is always someone out there who are league above you.