ICS2014 : Computer Organization and Architecture

Assignment #1: SMP Simulation Cache

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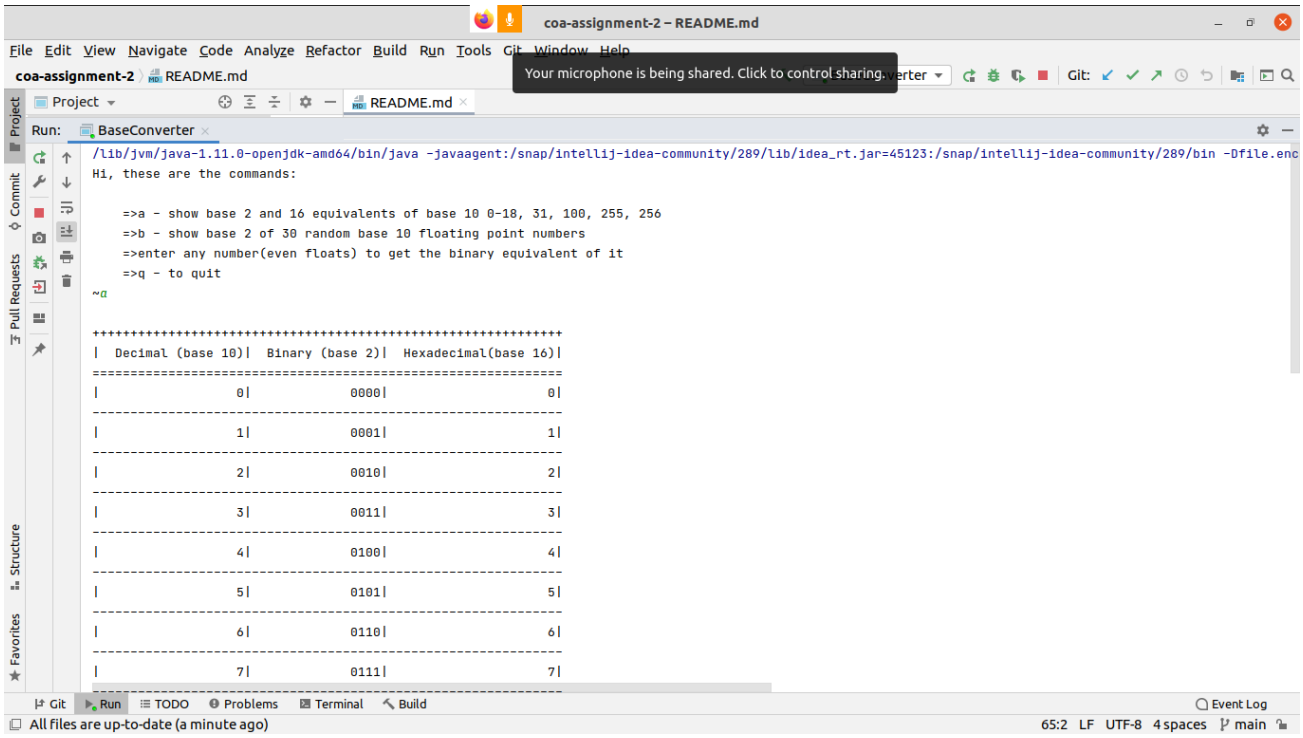
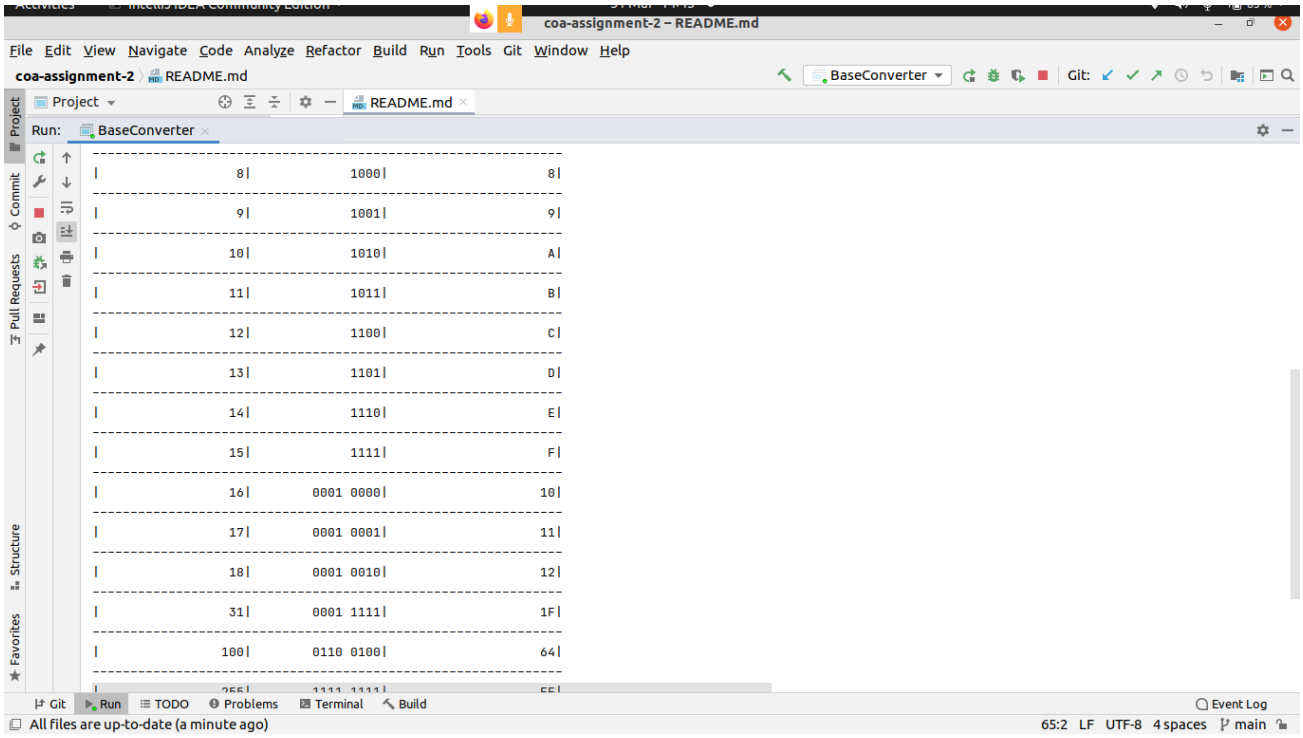
121353 Samuel Bryan,

119742 Georgina Njoroge

2.

a.


coa-assignment-2 – README.md
File Edit View Navigate Code Analyze Refactor Build Run Tools Git Window Help
Your microphone is being shared. Click to control sharing.
coa-assignment-2 README.md
Project README.md
Run: BaseConverter
/lib/jvm/java-1.11.0-openjdk-amd64/bin/java -javaagent:/snap/intellij-idea-community/289/lib/idea_rt.jar=45123:/snap/intellij-idea-community/289/bin -Dfile.enc
Hi, these are the commands:
=>a - show base 2 and 16 equivalents of base 10 0-18, 31, 100, 255, 256
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~a
Decimal (base 10)	Binary (base 2)	Hexadecimal(base 16)
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
Git Run TODO Problems Terminal Build Event Log
All files are up-to-date (a minute ago)
65:2 LF UTF-8 4 spaces main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BaseConverter
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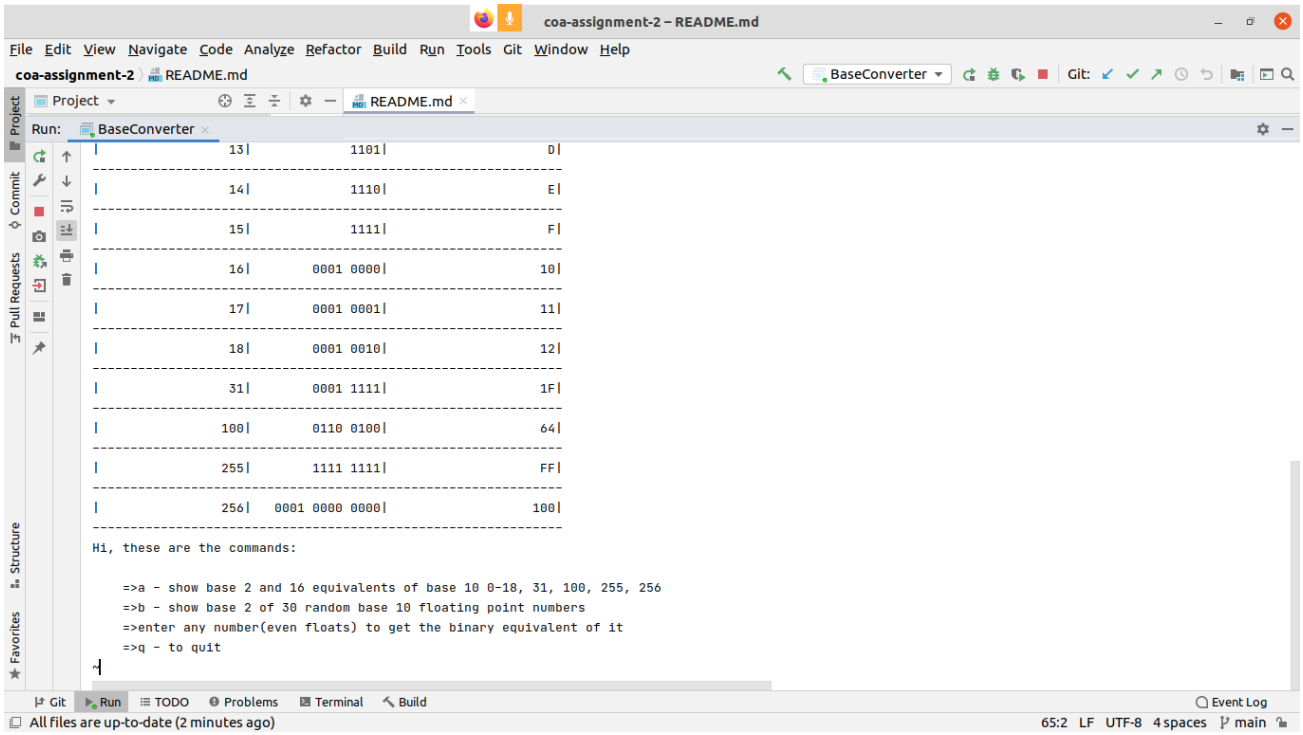
Run: BaseConverter
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F
16	0001 0000	10
17	0001 0001	11
18	0001 0010	12
31	0001 1111	1F
100	0110 0100	64
Git Run TODO Problems Terminal Build Event Log
All files are up-to-date (a minute ago)
65:2 LF UTF-8 4 spaces main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coa-assignment-2 README.md
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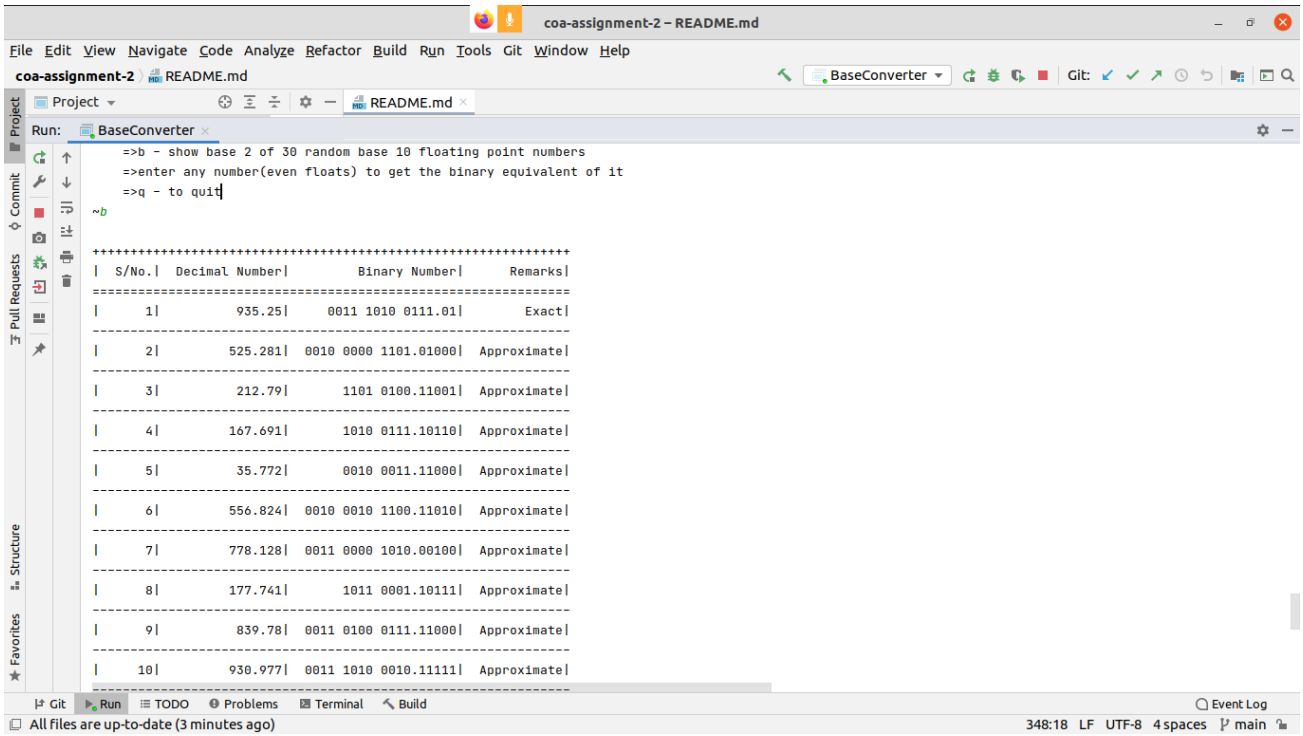
Project
README.md
Run: BaseConverter
13	1101	D
14	1110	E
15	1111	F
16	0001 0000	10
17	0001 0001	11
18	0001 0010	12
31	0001 1111	1F
100	0110 0100	64
255	1111 1111	FF
256	0001 0000 0000	100
Hi, these are the commands:
=>a - show base 2 and 16 equivalents of base 10 0-18, 31, 100, 255, 256
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~
Git Run TODO Problems Terminal Build
Event Log
All files are up-to-date (2 minutes ago)
65:2 LF UTF-8 4 spaces main

b.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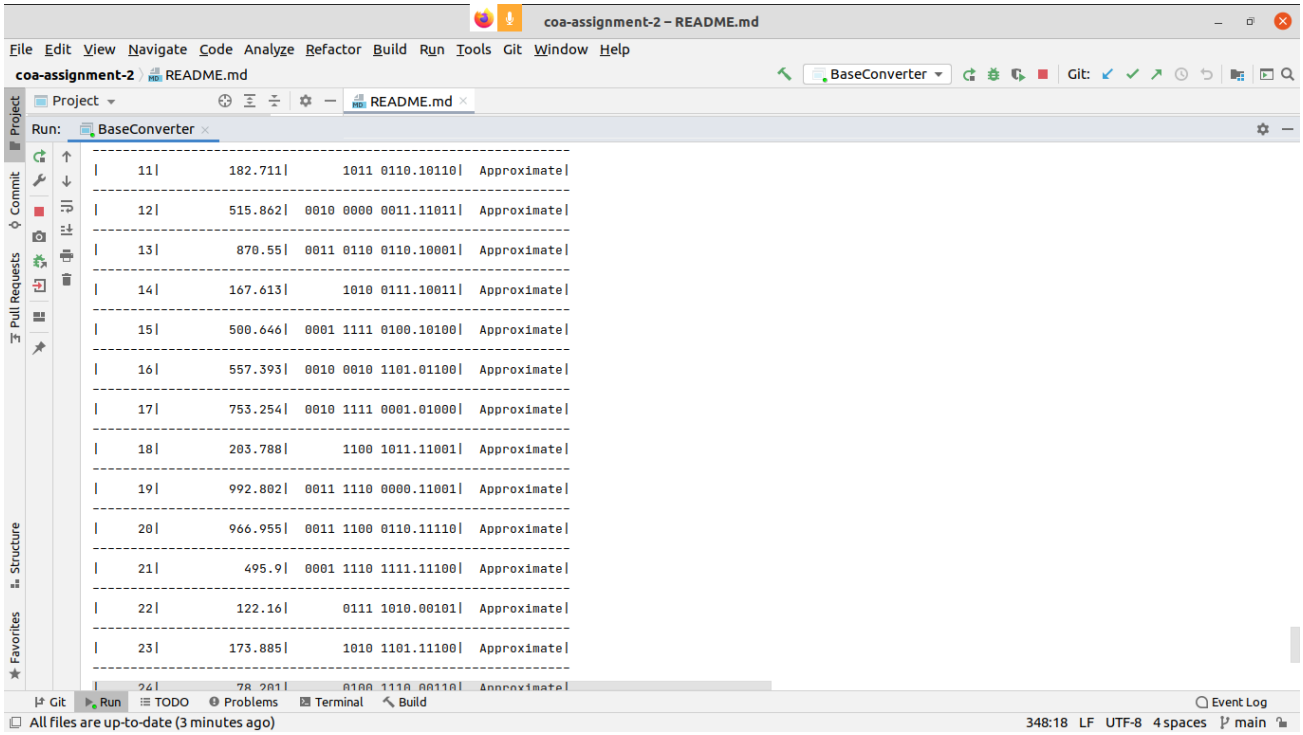
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~b
S/No.	Decimal Number	Binary Number	Remarks
1	935.25	0011 1010 0111.01	Exact
2	525.281	0010 0000 1101.01000	Approximate
3	212.79	1101 0100.11001	Approximate
4	167.691	1010 0111.10110	Approximate
5	35.772	0010 0011.11000	Approximate
6	556.824	0010 0010 1100.11010	Approximate
7	778.128	0011 0000 1010.00100	Approximate
8	177.741	1011 0001.10111	Approximate
9	839.78	0011 0100 0111.11000	Approximate
10	930.977	0011 1010 0010.11111	Approximate
Git Run TODO Problems Terminal Build
Event Log
All files are up-to-date (3 minutes ago)
348:18 LF UTF-8 4 spaces main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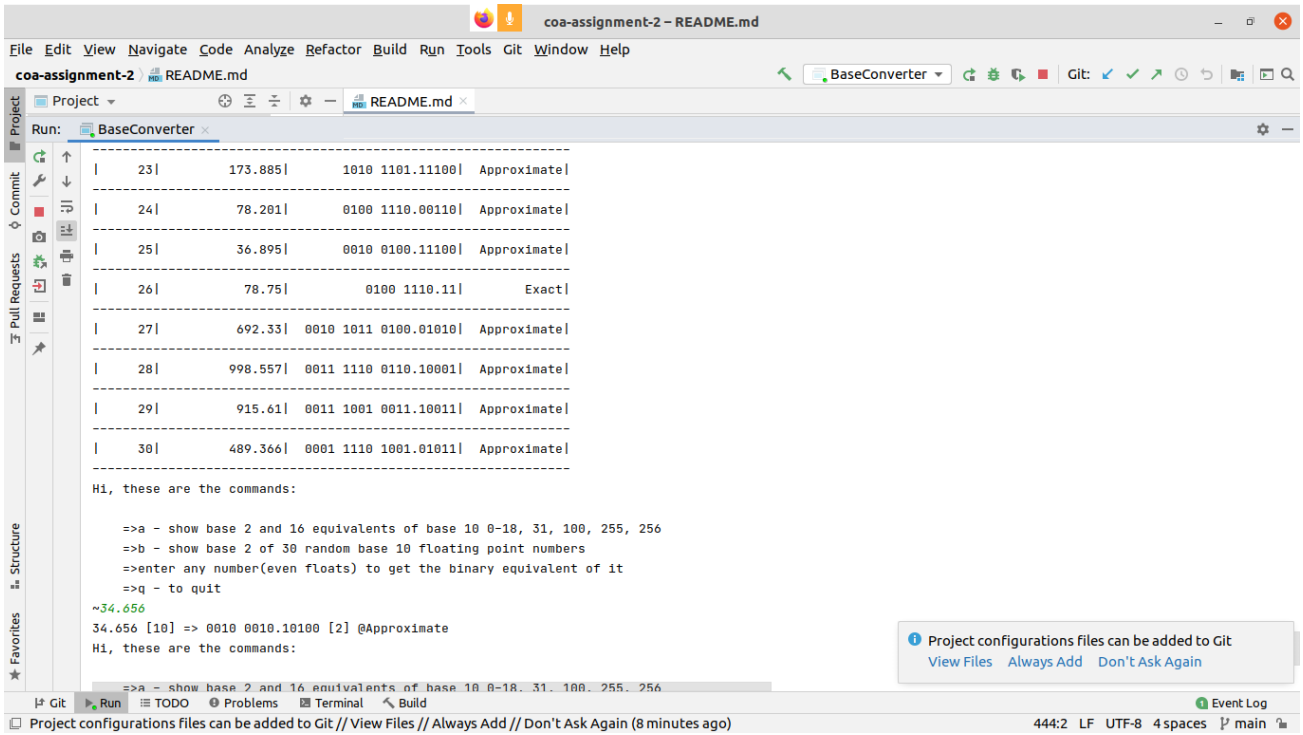
11	182.711	1011 0110.10110	Approximate
12	515.862	0010 0000 0011.11011	Approximate
13	870.55	0011 0110 0110.10001	Approximate
14	167.613	1010 0111.10011	Approximate
15	500.646	0001 1111 0100.10100	Approximate
16	557.393	0010 0010 1101.01100	Approximate
17	753.254	0010 1111 0001.01000	Approximate
18	203.788	1100 1011.11001	Approximate
19	992.802	0011 1110 0000.11001	Approximate
20	966.955	0011 1100 0110.11110	Approximate
21	495.9	0001 1110 1111.11100	Approximate
22	122.16	0111 1010.00101	Approximate
23	173.885	1010 1101.11100	Approximate
Git Run TODO Problems Terminal Build Event Log
All files are up-to-date (3 minutes ago)
348:18 LF UTF-8 4 spaces main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coa-assignment-2 README.md
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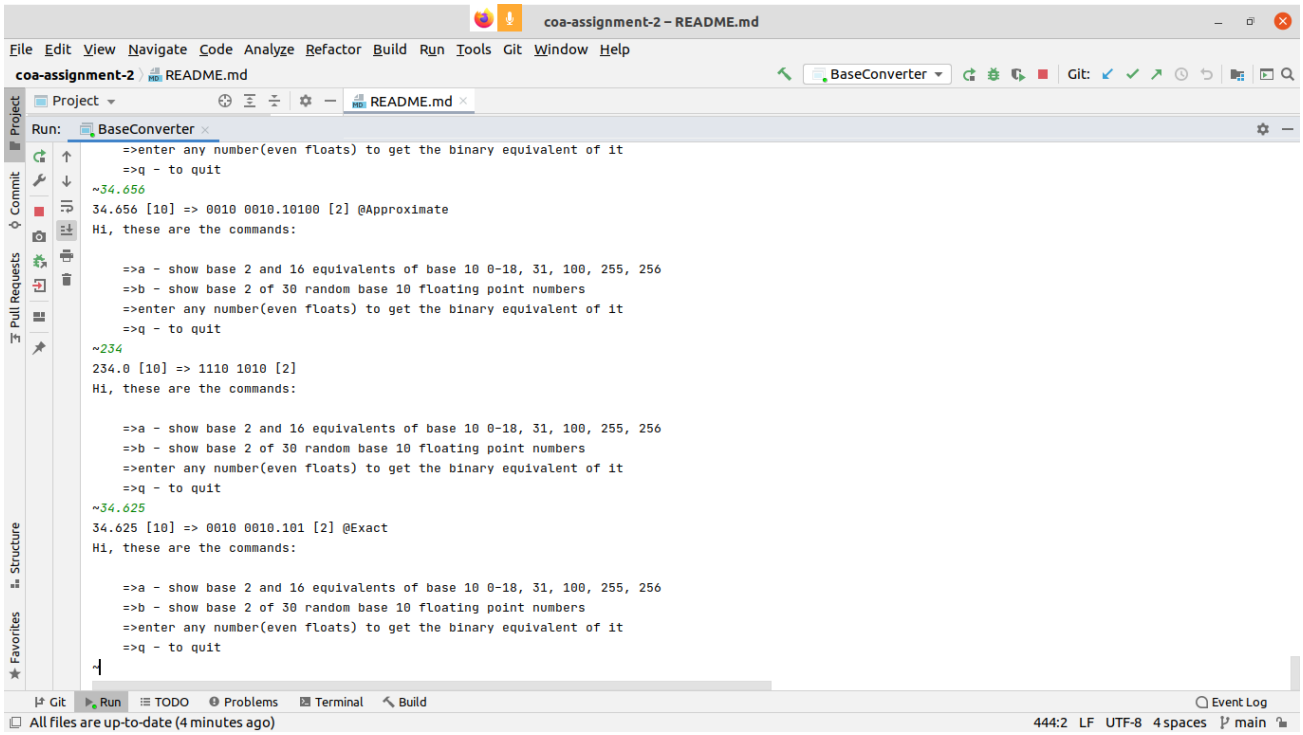
23	173.885	1010 1101.11100	Approximate
24	78.201	0100 1110.00110	Approximate
25	36.895	0010 0100.11100	Approximate
26	78.75	0100 1110.11	Exact
27	692.33	0010 1011 0100.01010	Approximate
28	998.557	0011 1110 0110.10001	Approximate
29	915.61	0011 1001 0011.10011	Approximate
30	489.366	0001 1110 1001.01011	Approximate
Hi, these are the commands:
=>a - show base 2 and 16 equivalents of base 10 0-18, 31, 100, 255, 256
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~34.656
34.656 [10] => 0010 0010.10100 [2] @Approximate
Hi, these are the commands:
Project configurations files can be added to Git
View Files Always Add Don't Ask Again
Git Run TODO Problems Terminal Build Event Log
Project configurations files can be added to Git // View Files // Always Add // Don't Ask Again (8 minutes ago)
444:2 LF UTF-8 4 spaces main


coa-assignment-2 – README.md
File Edit View Navigate Code Analyze Refactor Build Run Tools Git Window Help
coa-assignment-2 README.md
BaseConverter
Git:
Project
README.md
Run: BaseConverter
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~34.656
34.656 [10] => 0010 0010.10100 [2] @Approximate
Hi, these are the commands:
=>a - show base 2 and 16 equivalents of base 10 0-18, 31, 100, 255, 256
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~234
234.0 [10] => 1110 1010 [2]
Hi, these are the commands:
=>a - show base 2 and 16 equivalents of base 10 0-18, 31, 100, 255, 256
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~34.625
34.625 [10] => 0010 0010.101 [2] @Exact
Hi, these are the commands:
=>a - show base 2 and 16 equivalents of base 10 0-18, 31, 100, 255, 256
=>b - show base 2 of 30 random base 10 floating point numbers
=>enter any number(even floats) to get the binary equivalent of it
=>q - to quit
~
Git Run TODO Problems Terminal Build
Event Log
All files are up-to-date (4 minutes ago)
444:2 LF UTF-8 4 spaces main

References

None.