**Question 1**

**Code:**

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\*

\* @author Zach

\*/

public class Question1 {

public static void main(String[] args)

{

System.out.println("This is the Fahrenheit to Celsius Table:");

Fahrenheit\_to\_Celsius();

System.out.println();

System.out.println("This is the Celsius to Fahrenheit Table:");

Celsius\_to\_Fahrenheit();

}

public static void Fahrenheit\_to\_Celsius()

{

float fahren;

float celsius;

System.out.println("Fahrenheit Celsius");

System.out.println("========== =======");

for(fahren = 0; fahren <= 100; fahren++)

{

celsius = ((fahren - 32) \* 5/9);

System.out.printf("%10.0f %7.2f\n", fahren, celsius);

}

}

public static void Celsius\_to\_Fahrenheit()

{

float fahren;

float celsius;

System.out.println("Celsius Fahrenheit");

System.out.println("======= ==========");

for(celsius = 0; celsius <= 100; celsius++)

{

fahren = (celsius \* 9/5 + 32);

System.out.printf("%7.0f %10.1f\n", celsius, fahren);

}

}

}

**Output:**

debug:

This is the Fahrenheit to Celsius Table:

Fahrenheit Celsius

========== =======

0 -17.78

1 -17.22

2 -16.67

3 -16.11

4 -15.56

5 -15.00

6 -14.44

7 -13.89

8 -13.33

9 -12.78

10 -12.22

11 -11.67

12 -11.11

13 -10.56

14 -10.00

15 -9.44

16 -8.89

17 -8.33

18 -7.78

19 -7.22

20 -6.67

21 -6.11

22 -5.56

23 -5.00

24 -4.44

25 -3.89

26 -3.33

27 -2.78

28 -2.22

29 -1.67

30 -1.11

31 -0.56

32 0.00

33 0.56

34 1.11

35 1.67

36 2.22

37 2.78

38 3.33

39 3.89

40 4.44

41 5.00

42 5.56

43 6.11

44 6.67

45 7.22

46 7.78

47 8.33

48 8.89

49 9.44

50 10.00

51 10.56

52 11.11

53 11.67

54 12.22

55 12.78

56 13.33

57 13.89

58 14.44

59 15.00

60 15.56

61 16.11

62 16.67

63 17.22

64 17.78

65 18.33

66 18.89

67 19.44

68 20.00

69 20.56

70 21.11

71 21.67

72 22.22

73 22.78

74 23.33

75 23.89

76 24.44

77 25.00

78 25.56

79 26.11

80 26.67

81 27.22

82 27.78

83 28.33

84 28.89

85 29.44

86 30.00

87 30.56

88 31.11

89 31.67

90 32.22

91 32.78

92 33.33

93 33.89

94 34.44

95 35.00

96 35.56

97 36.11

98 36.67

99 37.22

100 37.78

This is the Celsius to Fahrenheit Table:

Celsius Fahrenheit

======= ==========

0 32.0

1 33.8

2 35.6

3 37.4

4 39.2

5 41.0

6 42.8

7 44.6

8 46.4

9 48.2

10 50.0

11 51.8

12 53.6

13 55.4

14 57.2

15 59.0

16 60.8

17 62.6

18 64.4

19 66.2

20 68.0

21 69.8

22 71.6

23 73.4

24 75.2

25 77.0

26 78.8

27 80.6

28 82.4

29 84.2

30 86.0

31 87.8

32 89.6

33 91.4

34 93.2

35 95.0

36 96.8

37 98.6

38 100.4

39 102.2

40 104.0

41 105.8

42 107.6

43 109.4

44 111.2

45 113.0

46 114.8

47 116.6

48 118.4

49 120.2

50 122.0

51 123.8

52 125.6

53 127.4

54 129.2

55 131.0

56 132.8

57 134.6

58 136.4

59 138.2

60 140.0

61 141.8

62 143.6

63 145.4

64 147.2

65 149.0

66 150.8

67 152.6

68 154.4

69 156.2

70 158.0

71 159.8

72 161.6

73 163.4

74 165.2

75 167.0

76 168.8

77 170.6

78 172.4

79 174.2

80 176.0

81 177.8

82 179.6

83 181.4

84 183.2

85 185.0

86 186.8

87 188.6

88 190.4

89 192.2

90 194.0

91 195.8

92 197.6

93 199.4

94 201.2

95 203.0

96 204.8

97 206.6

98 208.4

99 210.2

100 212.0

BUILD SUCCESSFUL (total time: 0 seconds)

**Question 2**

**Code:**

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\*

\* @author Zach

\*/

import java.util.Scanner;

public class Question2 {

public static void main(String[] args)

{

int number;

int result;

Scanner input = new Scanner(System.in);

System.out.print("Please enter an integer to be reversed");

number = input.nextInt();

result = Reverse\_Digits(number);

System.out.println("Your reversed integer is now: " + result);

}

public static int Reverse\_Digits(int a)

{

int reverse = 0;

while (a != 0)

{

reverse = reverse \* 10 + a % 10;

a /= 10;

}

return reverse;

}

}

**Output:**

debug:

Please enter an integer to be reversed 1738

Your reversed integer is now: 8371

BUILD SUCCESSFUL (total time: 4 seconds)

**Question 3**

**Code:**

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\*/

/\*\*

\*

\* @author Zach

\*/

import java.util.Scanner;

public class Question3 {

public static void main(String[] args)

{

Scanner input = new Scanner(System.in);

int number1;

int number2;

int gcd;

System.out.print("Please enter the first number for the GCD Calculator ");

number1 = input.nextInt();

System.out.print("\nThank you, now please enter the second number for the Calculator");

number2 = input.nextInt();

gcd = GCD(number1, number2);

System.out.println("\nthe Greatest Common Divisor for " + number1 + " and " + number2 + " is " + gcd);

}

public static int GCD(int a, int b)

{

int c;

while (b != 0)

{

c = a % b;

a = b;

b = c;

}

return a;

}

}

**Output:**

debug:

Please enter the first number for the GCD Calculator 64

Thank you, now please enter the second number for the Calculator36

the Greatest Common Divisor for 64 and 36 is 4

BUILD SUCCESSFUL (total time: 29 seconds)

**Question 4**

**Code:**

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\*/

/\*\*

\*

\* @author Zach

\*/

import java.util.Scanner;

public class Question4 {

public static void main(String[] args)

{

Scanner input = new Scanner(System.in);

int year;

int month;

int day;

int todayYear;

int todayMonth;

int todayDay;

int age;

System.out.print("Please input the year you were born for the Age Calculator");

year = input.nextInt();

System.out.print("\nThank you, now please input your Birth Month");

month = input.nextInt();

System.out.print("\nLovely, now please enter the day you were born");

day = input.nextInt();

System.out.print("\nPlease input the current year");

todayYear = input.nextInt();

System.out.print("\nThank you, now please input the current month");

todayMonth = input.nextInt();

System.out.print("\nLovely, now please enter the day today");

todayDay = input.nextInt();

age = CalculateAge(year, month, day, todayYear, todayMonth, todayDay);

System.out.println("Wow! You are " + age + " years old!");

}

public static int CalculateAge(int by, int bm, int bd, int ty, int tm, int td)

{

int difference;

difference = ty - by;

if (bm > tm)

{

difference += 1;

}

if (bm == tm)

{

if(bd > td)

{

difference += 1;

}

else

{

difference -= 1;

}

}

return difference;

}

}

**Output:**

debug:

Please input the year you were born for the Age Calculator1996

Thank you, now please input your Birth Month1

Lovely, now please enter the day you were born22

Please input the current year2016

Thank you, now please input the current month2

Lovely, now please enter the day today10

Wow! You are 20 years old!

BUILD SUCCESSFUL (total time: 10 seconds)