SAMPLE RUN 1:

```
cout << "SAMPLE RUN #1\n";
cout << "————————————————————————————————————————————————\n";
cout<<"1111 binary = "<<bin_to_dec("1111")<<" decimal\n";
cout<<"0900 binary = "<<bin_to_dec("0900")<<" decimal\n";
cout<<"101 binary = "<<bin_to_dec("101")<<" decimal\n";
cout<<"0000 binary = "<<bin_to_dec("0000")<<" decimal\n\n";

cout<<"21 decimal = "<<dec_to_bin(21)<<" binary\n";
cout<<"821 decimal = "<<dec_to_bin(821)<<" binary\n"; //you should get 1111111111111100
cout<<"4096 decimal = "<<dec_to_bin(4096)<<" binary\n"; //you should get 1100
cout<<"1337 decimal = "<<dec_to_bin(1337)<<" binary\n\n"; //you should get 11110100001001000000

cout<<"FFF hexadecimal = "<<hex_to_dec("FFF")<<" decimal\n"; //you should get 2,748
cout<<"F8 hexadecimal = "<<hex_to_dec("F8")<<" decimal\n"; //you should get 245
cout<<"0000 hexadecimal = "<<hex_to_dec("0000")<<" decimal\n"; //you should get 4,660
cout<<"00001 hexadecimal = "<<hex_to_dec("00001")<<" decimal\n\n"; //you should get 1,040,075


cout<<"0 decimal = "<<dec_to_hex(0)<<" hexadecimal\n"; //you should get 200
cout<<"123 decimal = "<<dec_to_hex(123)<<" hexadecimal\n";
cout<<"9 decimal = "<<dec_to_hex(9)<<" hexadecimal\n"; //you should get DBBA0
cout<<"89 decimal = "<<dec_to_hex(89)<<" hexadecimal\n\n"; //you should get FFF5
```

```
SAMPLE RUN #1
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1111 binary = 15 decimal
0900 binary = 36 decimal
101 binary = 5 decimal
0000 binary = 0 decimal

21 decimal = 10101 binary
821 decimal = 1100110101 binary
4096 decimal = 1000000000000 binary
1337 decimal = 10100111001 binary

FFF hexadecimal = 4095 decimal
F8 hexadecimal = 248 decimal
0000 hexadecimal = 0 decimal
00001 hexadecimal = 1 decimal

0 decimal =  hexadecimal
123 decimal = 7B hexadecimal
9 decimal = 9 hexadecimal
89 decimal = 59 hexadecimal

Program ended with exit code: 0
```

SAMPLE RUN 2:

```
cout << "SAMPLE RUN #2\n";
cout << "————————————————————————————————————————————————————————\n";
cout<<"10001 binary = "<<bin_to_dec("10001")<<" decimal\n";
cout<<"1000 binary = "<<bin_to_dec("1000")<<" decimal\n";
cout<<"010100 binary = "<<bin_to_dec("010100")<<" decimal\n";
cout<<"1 binary = "<<bin_to_dec("1")<<" decimal\n\n";

cout<<"1234 decimal = "<<dec_to_bin(1234)<<" binary\n";
cout<<"9 decimal = "<<dec_to_bin(9)<<" binary\n"; //you should get 1111111111111100
cout<<"8 decimal = "<<dec_to_bin(8)<<" binary\n"; //you should get 1100
cout<<"32 decimal = "<<dec_to_bin(32)<<" binary\n\n"; //you should get 11110100001001000000

cout<<"AAA hexadecimal = "<<hex_to_dec("AAA")<<" decimal\n"; //you should get 2,748
cout<<"FAD hexadecimal = "<<hex_to_dec("FAD")<<" decimal\n"; //you should get 245
cout<<"1 hexadecimal = "<<hex_to_dec("1")<<" decimal\n"; //you should get 4,660
cout<<"00001 hexadecimal = "<<hex_to_dec("00001")<<" decimal\n\n"; //you should get 1,040,075


cout<<"0 decimal = "<<dec_to_hex(0)<<" hexadecimal\n"; //you should get 200
cout<<"123 decimal = "<<dec_to_hex(123)<<" hexadecimal\n";
cout<<"9 decimal = "<<dec_to_hex(9)<<" hexadecimal\n"; //you should get DBBA0
cout<<"89 decimal = "<<dec_to_hex(89)<<" hexadecimal\n\n"; //you should get FFF5
```

```
SAMPLE RUN #2
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10001 binary = 17 decimal
1000 binary = 8 decimal
010100 binary = 20 decimal
1 binary = 1 decimal

1234 decimal = 10011010010 binary
9 decimal = 1001 binary
8 decimal = 1000 binary
32 decimal = 100000 binary

AAA hexadecimal = 2730 decimal
FAD hexadecimal = 4013 decimal
1 hexadecimal = 1 decimal
00001 hexadecimal = 1 decimal

0 decimal =  hexadecimal
123 decimal = 7B hexadecimal
9 decimal = 9 hexadecimal
89 decimal = 59 hexadecimal

Program ended with exit code: 0
```

SAMPLE RUN 3:

```
cout << "SAMPLE RUN #3\n";
cout << "————————————————————————————————————————————————————————\n";
cout<<"111 binary = "<<bin_to_dec("111")<<" decimal\n";
cout<<"1111 binary = "<<bin_to_dec("1111")<<" decimal\n";
cout<<"11 binary = "<<bin_to_dec("11")<<" decimal\n";
cout<<"11111 binary = "<<bin_to_dec("11111")<<" decimal\n\n";

cout<<"255 decimal = "<<dec_to_bin(225)<<" binary\n";
cout<<"31 decimal = "<<dec_to_bin(31)<<" binary\n"; //you should get 1111111111111100
cout<<"15 decimal = "<<dec_to_bin(15)<<" binary\n"; //you should get 1100
cout<<"127 decimal = "<<dec_to_bin(127)<<" binary\n\n"; //you should get 11110100001001000000

cout<<"BB hexadecimal = "<<hex_to_dec("BB")<<" decimal\n"; //you should get 2,748
cout<<"BAD hexadecimal = "<<hex_to_dec("BAD")<<" decimal\n"; //you should get 245
cout<<"0 hexadecimal = "<<hex_to_dec("0")<<" decimal\n"; //you should get 4,660
cout<<"000010 hexadecimal = "<<hex_to_dec("000010")<<" decimal\n\n"; //you should get 1,040,075


cout<<"255 decimal = "<<dec_to_hex(255)<<" hexadecimal\n"; //you should get 200
cout<<"31 decimal = "<<dec_to_hex(31)<<" hexadecimal\n";
cout<<"15 decimal = "<<dec_to_hex(15)<<" hexadecimal\n"; //you should get DBBA0
cout<<"127 decimal = "<<dec_to_hex(127)<<" hexadecimal\n\n"; //you should get FFF5
```

```
SAMPLE RUN #3
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111 binary = 7 decimal
1111 binary = 15 decimal
11 binary = 3 decimal
11111 binary = 31 decimal

255 decimal = 11100001 binary
31 decimal = 11111 binary
15 decimal = 1111 binary
127 decimal = 1111111 binary

BB hexadecimal = 187 decimal
BAD hexadecimal = 2989 decimal
0 hexadecimal = 0 decimal
000010 hexadecimal = 16 decimal

255 decimal = FF hexadecimal
31 decimal = 1F hexadecimal
15 decimal = F hexadecimal
127 decimal = 7F hexadecimal

Program ended with exit code: 0
```

SAMPLE RUN 4:

```
cout << "SAMPLE RUN #4\n";
cout << "————————————————————————————————————————————————————\n";
cout<<"1101 binary = "<<bin_to_dec("1101")<<" decimal\n";
cout<<"11100111 binary = "<<bin_to_dec("11100111")<<" decimal\n";
cout<<"1110011 binary = "<<bin_to_dec("1110011")<<" decimal\n";
cout<<"11011101 binary = "<<bin_to_dec("11011101")<<" decimal\n\n";

cout<<"256 decimal = "<<dec_to_bin(256)<<" binary\n";
cout<<"32 decimal = "<<dec_to_bin(32)<<" binary\n"; //you should get 1111111111111100
cout<<"11 decimal = "<<dec_to_bin(11)<<" binary\n"; //you should get 1100
cout<<"9082 decimal = "<<dec_to_bin(9082)<<" binary\n\n"; //you should get 1111010001001000000

cout<<"CC hexadecimal = "<<hex_to_dec("CC")<<" decimal\n"; //you should get 2,748
cout<<"DAD hexadecimal = "<<hex_to_dec("DAD")<<" decimal\n"; //you should get 245
cout<<"67 hexadecimal = "<<hex_to_dec("67")<<" decimal\n"; //you should get 4,660
cout<<"21 hexadecimal = "<<hex_to_dec("21")<<" decimal\n\n"; //you should get 1,040,075


cout<<"129 decimal = "<<dec_to_hex(129)<<" hexadecimal\n"; //you should get 200
cout<<"22 decimal = "<<dec_to_hex(22)<<" hexadecimal\n";
cout<<"999 decimal = "<<dec_to_hex(999)<<" hexadecimal\n"; //you should get DBBA0
cout<<"666 decimal = "<<dec_to_hex(666)<<" hexadecimal\n\n"; //you should get FFF5
```

```
SAMPLE RUN #4
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1101 binary = 13 decimal
11100111 binary = 231 decimal
1110011 binary = 115 decimal
11011101 binary = 221 decimal

256 decimal = 100000000 binary
32 decimal = 100000 binary
11 decimal = 1011 binary
9082 decimal = 10001101111010 binary

CC hexadecimal = 204 decimal
DAD hexadecimal = 3501 decimal
67 hexadecimal = 103 decimal
21 hexadecimal = 33 decimal

129 decimal = 81 hexadecimal
22 decimal = 16 hexadecimal
999 decimal = 3E7 hexadecimal
666 decimal = 29A hexadecimal

Program ended with exit code: 0
```

SAMPLE RUN 5:

```
cout << "SAMPLE RUN #5\n";
cout << "_____\n";
cout<<"10101 binary = "<<bin_to_dec("10101")<<" decimal\n";
cout<<"0101 binary = "<<bin_to_dec("0101")<<" decimal\n";
cout<<"101 binary = "<<bin_to_dec("101")<<" decimal\n";
cout<<"1001 binary = "<<bin_to_dec("1001")<<" decimal\n\n";

cout<<"111 decimal = "<<dec_to_bin(111)<<" binary\n";
cout<<"222 decimal = "<<dec_to_bin(222)<<" binary\n"; //you should get 1111111111111100
cout<<"333 decimal = "<<dec_to_bin(333)<<" binary\n"; //you should get 1100
cout<<"444 decimal = "<<dec_to_bin(444)<<" binary\n\n"; //you should get 1111010000100100000

cout<<"A hexadecimal = "<<hex_to_dec("A")<<" decimal\n"; //you should get 2,748
cout<<"B hexadecimal = "<<hex_to_dec("B")<<" decimal\n"; //you should get 245
cout<<"C hexadecimal = "<<hex_to_dec("C")<<" decimal\n"; //you should get 4,660
cout<<"D hexadecimal = "<<hex_to_dec("D")<<" decimal\n\n"; //you should get 1,040,075


cout<<"15 decimal = "<<dec_to_hex(15)<<" hexadecimal\n"; //you should get 200
cout<<"14 decimal = "<<dec_to_hex(14)<<" hexadecimal\n";
cout<<"13 decimal = "<<dec_to_hex(13)<<" hexadecimal\n"; //you should get DBBA0
cout<<"12 decimal = "<<dec_to_hex(12)<<" hexadecimal\n\n"; //you should get FFF5

return 0;
```

```
SAMPLE RUN #5
_____
10101 binary = 21 decimal
0101 binary = 5 decimal
101 binary = 5 decimal
1001 binary = 9 decimal

111 decimal = 1101111 binary
222 decimal = 11011110 binary
333 decimal = 101001101 binary
444 decimal = 110111100 binary

A hexadecimal = 10 decimal
B hexadecimal = 11 decimal
C hexadecimal = 12 decimal
D hexadecimal = 13 decimal

15 decimal = F hexadecimal
14 decimal = E hexadecimal
13 decimal = D hexadecimal
12 decimal = C hexadecimal

Program ended with exit code: 0
```