# **AIR UNIVERSITY**



### DEPARTMENT OF COMPUTER SCIENCE

## **Assignment 1**

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**Subject: Compiler Construction** Semester: VIII

**Objective: Decimal to Binary** 

## **ASSESSMENT:**

Attributes	Excellent (5)	Good (4)	Average (3)	Satisfactory (2)	Unsatisfactory (1)
Ability to Conduct Task					
Ability to assimilate the results					
Effective use of theorems/postulates/formulas					

Total Marks: Obtained Marks:

### **REPORT ASSESSMENT:**

Attributes	Excellent (5)	Good (4)	Average (3)	Satisfactory (2)	Unsatisfactory (1)
Data presentation					
Experimental results					
Conclusion					

### Code(s):

#### decimal\_to\_binary.l

#### decimal\_to\_binary.y

```
%{
#include <stdio.h>
#include <stdlib.h>

// function to convert decimal to binary
void dec_to_bin(int n) {
    int binary[32]; // array to store binary number
    int i = 0; // counter for binary array

    while (n > 0) { // convert decimal to binary
        binary[i] = n % 2; // store remainder in binary array
        n = n / 2; // divide number by 2
        i++; // increment counter
    }

    printf("Binary Equivalent: "); // print binary equivalent
    for (int j = i - 1; j >= 0; j--) { // print binary number
        printf("%d", binary[j]); // print binary digit
    }
}
```

```
printf("\n");
int yylex(void);
void yyerror(const char *s);
%}
%token NUM
%token END
%%
input: NUM { printf("Binary Equivalent: "); dec_to_bin($1); } // convert decimal
to binary
     input NUM { dec_to_bin($2); } // convert decimal to binary
     input END { printf("\n"); } // print newline
%%
void yyerror(const char *s) { // error handling function
    fprintf(stderr, "%s\n", s);
int main() {
    printf("Enter Decimal Number(s): ");
    yyparse();
    return 0;
```

#### **Output:**