

# Indian Institute of Technology Patna

## CS352: PPL and Compiler Lab

### Assignment Questions

Time: 3 - 6PM

**Question 1:** Implement an YACC program to convert base 2 digit to base 10 digit.

**Example:**

**Input:** 1101

**Output:** 13

**Question 2:** Implement a program to construct a symbol table for c source code using Lex and Yacc.

**Example:**

**Input:**

```

1  #include<stdio.h>
2  #include<string.h>
3
4  int main() {
5      int x=1;
6      float f;
7      int a=3;
8      int x;
9      a = x * 3 + 5;
10     if(x>a) {
11         printf("Hi!");
12         a = x * 3 + 100;
13         if(x>a) {
14             printf("Hi!");
15             a = x * 3 + 100;
16         }
17         else {
18             x = a * 3 + 100;
19         }
20     }
21     else {
22         x = a * 3 + 98;
23     }
24 }
```

**Output:**

SYMBOL	DATATYPE	TYPE	LINE	NUMBER
#include<stdio.h>		Header	0	
#include<string.h>		Header	1	
main	int	Function	3	
x	int	Variable	4	
1	CONST	Constant	4	
f	float	Variable	5	
a	int	Variable	6	
3	CONST	Constant	6	
5	CONST	Constant	8	
if	N/A	Keyword	9	
printf	N/A	Keyword	10	
100	CONST	Constant	11	
else	N/A	Keyword	16	
98	CONST	Constant	21	

Finished!