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| Semester | Semester 1 – EXCS |
| Subject | Experiment 2 (Week 2) |
| Subject In-charge | Prof. Divya Nimbalkar |
| Laboratory | Lab 11A |

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| Student Name | Hemant Sanjay Bhoi |
| Roll Number | 23108A0032 |
| Grade and Subject  Teacher’s Signature |  |

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| Experiment Title | * To use various operators in C * Unary, Binary, Relational, Logical * Use of if and if else statements | |
| Resources / Apparatus Required | Hardware:  Computer system | Software:  VS Studio |
| Description | * A C compiler (eg.,GCC) * A text editor for writing C code | |
| Program | // To use various operators in C like unary, binary, relational, logical //  #include <stdio.h>  int main() {  // Unary operators  int a = 10, b = 5;  printf("Unary Operators:\n");  printf("a = %d, b = %d\n", a, b);  printf("++a = %d\n", ++a); // Increment a and then use its value  printf("b-- = %d\n", b--); // Use b and then decrement it  printf("a = %d, b = %d\n\n", a, b);  // Binary operators  int x = 20, y = 30;  printf("Binary Operators:\n");  printf("x + y = %d\n", x + y); // Addition  printf("x - y = %d\n", x - y); // Subtraction  printf("x \* y = %d\n", x \* y); // Multiplication  printf("x / y = %d\n", x / y); // Division  printf("x %% y = %d\n", x % y); // Modulo (remainder after division)  printf("x << 1 = %d\n", x << 1); // Left shift  printf("x >> 1 = %d\n\n", x >> 1); // Right shift  // Relational operators  int p = 10, q = 20;  printf("Relational Operators:\n");  printf("p == q : %d\n", p == q); // Equal to  printf("p != q : %d\n", p != q); // Not equal to  printf("p < q : %d\n", p < q); // Less than  printf("p > q : %d\n", p > q); // Greater than  printf("p <= q : %d\n", p <= q); // Less than or equal to  printf("p >= q : %d\n\n", p >= q); // Greater than or equal to  // Logical operators  int m = 1, n = 0;  printf("Logical Operators:\n");  printf("m && n : %d\n", m && n); // AND  printf("m || n : %d\n", m || n); // OR  printf("!m : %d\n", !m); // NOT  return 0;  }  // Use of if and if else statements //  // Outputs // | |
| Output | Output : To use various operators in C like Unary, Binary, Relational, Logical.  Output : -  Unary Operators:  a = 10, b = 5  ++a = 11  b-- = 5  a = 11, b = 4  Binary Operators:  x + y = 50  x - y = -10  x \* y = 600  x / y = 0  x % y = 20  x << 1 = 40  x >> 1 = 10  Relational Operators:  p == q : 0  p != q : 1  p < q : 1  p > q : 0  p <= q : 1  p >= q : 0  Logical Operators:  m && n : 0  m || n : 1  !m : 0  Output for use if and if else statements in C.  Output :-  Enter a number: 5  The number is positive.  The number is either zero or positive. | |
| Conclusion: | * We can compare different variables and there values using relational operators. * We can make logic between two variables using logical operators. * We can controll C code our condition wise using if and if else statements. | |