**Department of Electrical and Computer Engineering, NSU**

**CSE 115L: Fundamentals of Computer Programming (Section 4)**

**Lab 07 (Switch Case) Faculty: Rsl**

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| If-else (alternative way of declaration) | Same as |
| #include<stdio.h>  int main()  {  int i=5;  (i==5)? printf("Hi-%d \n",i): printf("No %d \n");  return 0;  } | #include<stdio.h>  int main()  {  int i=5;  if(i==5)  printf("Hi-%d \n",i);  else  printf("No %d ! \n",i);  return 0;} |

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| **Nested-if else basic structure** | **Finding max of 3 num** | **Using Ternary Operator** |
| if( expression )  {  if( expression1 )  {  statement-block1;  }  else  {  statement-block 2;  }  }  else  {  statement-block 3;  } | #include <stdio.h>  int main( )  {  int a,b,c;  printf("enter 3 number:\n");  scanf("%d%d%d",&a,&b,&c);  //finding maximum number  if(a>b)  {  if( a > c)  printf("%d is greatest",a);  else  printf("%d is greatest",c);  }  else  {  if( b> c)  printf("%d is greatest",b);  else  printf("%d is greatest",c);  }  return 0;  } | #include<stdio.h>  void main()  {  int a, b, c, large;  printf("Enter any three number:");  scanf("%d%d%d",&a,&b,&c);  large=a>b ? (a>c?a:c) : (b>c?b:c);  printf("Largest Number is: %d",large);  } |

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| Syntax of switch in C | Ex-1 (switch demo) |
| switch ( expression )  {  case label1 :  body1  break;  case label2 :  body2  break;  case label3 :  body3  break;  default :  default-body  break;  }  next-statement; | #include<stdio.h>  int main()  {  int n;  printf("Enter a number between (1-3):");  scanf("%d",&n);  switch(n)  {  case 1:  printf("Pressed 1!\n");  break;  case 2:  printf("Pressed 2!\n");  break;  case 3:  printf("Pressed 3!\n");  break;  default :  printf("You did not press between (1-3)\n");  }  } |

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| Ex-2(two or more cases sharing one break statements) | Ex-3 Arithmatic Operations using switch case |
| #include<stdio.h>  int main()  {  char c;  printf("Enter a Grade letter:");  scanf("%c",&c);  switch(c)  {  case 'A':  case 'a':  printf("You got A! \n");  break;  case 'B':  case 'b':  printf("You got B! \n");  break;  case 'C':  case 'c':  printf("You got C! \n");  break;  default:  printf("Invalid Grade! \n");  }  return 0;  } | #include<stdio.h>  int main()  {  char g;  float a,b,c;  printf("Pleas enter the first number: ");  scanf("%f",&a);  printf("Pleas enter the second number: ");  scanf("%f",&b);  printf("Please enter which action you want to do from \nthe followings-> ( + , - , \* , /) : ");  fflush(stdin);  scanf("%c",&g);  printf("\n\n");  switch(g)  {  case '+' : c=a+b;  printf("Result is : %f",c);  break;  case '-' : c=a-b;  printf("Result is : %f",c);  break;  case '\*' : c=a\*b;  printf("Result is : %f",c);  break;  case '/' : c=a/b;  printf("Result is : %f",c);  break;  default: printf("Sorry you have given wrong action.");  }  return 0;} |

**Rules for writing a switch statement**

1. Case Labels must be unique:

2. Case Labels must end with Colon

3. Case labels must have constants / constant expression

4. Case labels must be of integral Type ( Integer,Character) : case 20+20: or case 10:

5. Case labels should not be floating point numbers: case 1.23: not allowed

6. Switch case should have at most one default label

7. Default label is Optional

8. Default can be placed anywhere in the switch

9. Break Statement takes control out of the switch

10. Two or more cases may share one break statement

11. Nesting (switch within switch) is allowed.

12. Relational Operators are not allowed in Switch Statement.

13. Constant Variable is allowed in switch Case Statement.

**Task (10 marks)**

1. Write a program that takes in a character and converts it to upper case if the user input is lower case and vice versa.

Sample output

**Enter character: a Enter character: B**

**Result : A Result: b**

2. Write a program that takes a month number as input and shows the number of days that particular month has. (Use Switch-Case).