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| **Unit –2** | | |
| **Day – 6** | | |
| **Lec #** | **Topics to be covered :** | **Assignments :** |
| 1 | L-values and R-values, Type casting & type conversion, The switch statement | **Essential Assignment**   1. Write a C program for calculator with basic operations (+,-,\*, /). User needs to provide two numbers and an operator from above list. Program should print the values inserted along with its answer. Use the switch statement for the same. If user inserts wrong choice, program should print the appropriate message.   Demo:  Enter Number 1: 3  Enter Number 2: 5  Enter Operation (+,-,\*,/) : +  Number 1 is : 3  Number 2 is : 5  Answer (+) is : 8   1. Write a program in C to find out factorial of a given number.   (Hint : Factorial of number 5 is shown as 5!.  It can be counted as 5!= 5X4X3X2X1)   1. Write a program to find sum of all digits of given number. Take number as 4 digit number.   (Hint : If the number is 4532 then your answer must be 4+5+3+2=14)   1. Write a program to find reverse of a given number. Take number as 4 digit number.   (Hint : If the number is 4532 then your answer must be 2354)   1. Write a C program to design the following pattern:   \*  \* \*  \* \* \*  \* \* \* \*  6. Write a C program to design the following pattern:  1  1 2  1 2 3  1 2 3 4  **Desirable Assignment**   1. In the calculator program (Essential Assignment Section), remove break statement and execute the program. (Hint: give + as input for the first time execution and – as input for the second time execution.) Refer the output. Give the explanation for such output. 2. Write a C program to check whether given character is VOWEL or CONSONANT using switch.   (Hint : Vowels : a, e, i, o, u  Consonants : Rest of the alphabet characters )   1. A manufacturing company classified its executives into 4 levels for the benefit of certain perks. The levels and corresponding perks are shown below (All figures are in Rs.):  |  |  |  |  | | --- | --- | --- | --- | | **Levels** | **Perks** | | **Minimum Basic Pay** | |  | **Conveyance**  **Allowance** | **Entertainment**  **Allowance** | | 1 | 1000 | 500 | 6000 | | 2 | 750 | 200 | 4000 | | 3 | 500 | 100 | 2000 | | 4 | 250 | 0 | 1000 |   Income tax is deducted from the salary on a percentage basis as follows.   |  |  | | --- | --- | | **Gross Salary** | **Tax Rate** | | Gross <= 2000 | No Deduction | | 2000 to 4000 | 3% of Gross Salary | | 4000 to 5000 | 5% of Gross Salary | | Gross > 5000 | 8% of Gross Salary |   Write a program that will read an executive's job number, level number and basic pay and then compute the net salary after withholding (deducting) Income tax. Gross Salary = Basic + HRA + Perks ( HRA = 10% of Basic) Net Salary = Gross Salary – Income Tax.   1. Write a C Program to Generate Sum first 100 integer numbers using while loop. 2. Write a C program to read 4-digit number and print the multiply of first and last digit of the number. 3. Write a C program to design the following pattern:   1  2 2  3 3 3  4 4 4 4  5 5 5 5 5   1. Write a program to find out and print all prime numbers lying between 1 to 200. 2. Write a C program to design the following pattern:   1  A B  1 2 3  A B C D  1 2 3 4 5   1. Write a C program to design the following pattern:   \*  \*\*  \*\*\*  \*\*\*\*  \*\*\*\*\*  \*\*\*\*\*\*  \*\*\*\*\*  \*\*\*\*  \*\*\*  \*\*  \* |
| 2 | Iteration and repetitive execution, While Construct, For Construct |
| **MCQ Questions** | | |
| 1 | What is the output of C Program with switch statement or block?  int main()  {  int a;  switch(a)  {  printf("Apache ");  }  printf("Herohonda");  }  A) Apache Herohonda B) Herohonda C) No Output D) Compiler Error  ANS:\_\_\_\_\_\_\_\_ | |
| 2 | What is the output of C Program with switch statement or block?  int main()  { char code=64;  switch(code)  {  case 64: printf("SHIP ");break;  case 8\*8: printf("BOAT "); break;  default: printf("PETROL");  }  printf("CHILLY");  }  A) SHIP CHILLY  B) BOAT CHILLY  C) BOAT PETROL CHILLY  D) Compiler error  ANS:\_\_\_\_\_\_\_\_ | |
| 3 | What is the output of C Program with switch statement or block?  int main()  {  switch(24.5)  {  case 24.5:  printf("Silver ");  break;  case 25.0:  printf("Gold ");  break;  default:  printf("Tin ");  }  printf("Copper ");  }  A) Silver Copper B) Tin Copper C) Copper D) Compiler Error  ANS:\_\_\_\_\_ | |
| 4 | What is the output of C Program.?  int main()  {  while(true)  {  printf("RABBIT");  break;  }  return 0;  }  A) RABBIT  B) RABBIT is printed unlimited number of times.  C) No output  D) Compiler error.  ANS: | |
| 5 | What will be the output of the following C code?  #include <stdio.h>  void main()  {  double k = 0;  for (k = 0.0; k < 3.0; k++)  printf("Hello");  }  a) Error  b) Hello is printed thrice  c) Hello is printed twice  d) Hello is printed infinitely  ANS:\_\_\_\_\_\_\_\_ | |