Lesson 2 Lab

Task 1: To make a program which reads in an integer from user and then print “Bonjour” that many times. (Eg, if reads in 4, print “Bonjour” 4 times), using one while loop

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| #include <stdio.h>  int main() {  int input;  int n = 1;  scanf("%d", &input);  while (n <= input)  {  printf("Bonjour\n");  n++;  }  return 0;  } |

Task 2:To make a program which reads in an integer from user, and then print all positive odd numbers up to the user’s input(Eg, if reads in 6, print 1 3 5), using one for loop

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| #include <stdio.h>  int main() {  int input;  int n = 1;  scanf("%d", &input);    for (int n = 1; n <= input; n++)  {  if ((n % 2) == 1)  {  printf("%d\n", n);  }  }  return 0;  } |

Task 3: To make a program which reads in an integer from user, and then print all numbers between 1 and the read in value (exclusive) (Eg, if reads in 3, print 1 2), using one for loop

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| #include <stdio.h>  int main() {  int input;  int n = 1;  scanf("%d", &input);    for (int n = 1; n < input; n++)  {  printf("%d\n", n);  }  return 0;  } |

Task 4: To make a program which keep reading in integers from user, and then print the running sum, until the running sum is bigger than 100 (Eg, if reads in 5, print 5; after that, reads in 10, print 15, stop reading only if the sum is over 100), using one do-while loop

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| #include <stdio.h>  int main() {  int input;  int n = 0;  do  {  scanf("%d", &input);  printf("%d\n", n + input);  n = n + input;  }  while (n <= 100);  return 0;  } |

Task 5: To make a program which keep reading in integers from user, and then print double the value, until user put in a non-positive integer (Eg, if reads in 5, print 10; stop reading if got 0 or negative integer), using one do-while loop

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| #include <stdio.h>  int main() {  int input;  do  {  scanf("%d", &input);  printf("%d\n", 2 \* input);  }  while (input > 0);  return 0;  } |

Task 6: make a program prints out numbers between 1 and 70: which are multiples of 3, or multiples of 5, but **NOT** multiple of 15, using only ONE if-statement

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| #include <stdio.h>  int main() {  int n = 1;  while (n <= 70)  {  if ((n % 15) == 0);  else if (((n % 3) == 0) || ((n % 5) == 0))  {  printf("%d\n", n);  }  n++;  }  return 0;  }} |

Task 7: make a program reads in one integer, then print out “even number”, “positive odd number” or “negative odd number” accordingly, using one switch statement

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| // Online C compiler to run C program online  #include <stdio.h>  int main() {  int number;  int result;  scanf("%d", &number);  if (number % 2 == 0)  {  result = 0;  }  else if ((number % 2 != 0) && (number > 0))  {  result = 1;  }  else if ((number % 2 != 0) && (number < 0))  {  result = 2;  }  switch (result) {  case 0:  printf("even number\n");  break;  case 1:  printf("positive odd number\n");  break;  case 2:  printf("negative odd number\n");  break;  default:  printf("unkown\n");  break;  }  return 0;  } |

Task 8: make a program reads in one char, then print out the capital letter of it if the input char is a vowel, otherwise print ‘X’, using one switch statement

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| // Online C compiler to run C program online  #include <stdio.h>  int main() {  char input;  int result;  scanf("%c", &input);  if (input == 'a')  {  result = 0;  }  else if (input == 'e')  {  result = 1;  }  else if (input == 'i')  {  result = 2;  }  else if (input == 'o')  {  result = 3;  }  else if (input == 'u')  {  result = 4;  }  else if (input == 'y')  {  result = 5;  }      switch (result) {  case 0:  printf("A");  break;  case 1:  printf("E");  break;  case 2:  printf("I");  break;  case 3:  printf("O");  break;  case 4:  printf("U");  break;  case 5:  printf("Y");  break;  default:  printf("X");  break;  }  return 0;  } |

Task 9: make a program reads in an integer, then print out all positive even numbers smaller than this user input value, using a break statement to stop printing when the even value is bigger than 15

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| // Online C compiler to run C program online  #include <stdio.h>  int main() {  int input;  int result;  scanf("%d", &input);    for (int x = 2; x < input; x = x + 2) {  if (x > 15) {  break;  }  printf("%d\n", x);  }  return 0;  } |

Task 10: make a program reads in one integer, then print out all positive even numbers smaller than this user input value, using a continue statement to skip those numbers which are multiples of 6

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| // Online C compiler to run C program online  #include <stdio.h>  int main() {  int input;  int result;  scanf("%d", &input);    for (int x = 2; x < input; x = x + 2) {  if ((x % 6) == 0) {  continue;  }  printf("%d\n", x);  }  return 0;  } |