**TUTORIAL 2 SOLUTIONS**

**Question 1**

#include <stdio.h>

int main()

{

float sales, salary;

printf("Enter sales in dollars (-1 to end): ");

scanf("%f", &sales);

while (sales != -1)

{

salary = 200 + sales\*0.09;

printf("Salary is: $%.2f\n\n", salary);

printf("Enter sales in dollars (-1 to end): ");

scanf("%f", &sales);

}

return 0;

}

**Question 2**

#include <stdio.h>

int main()

{

float hours, rate, salary;

printf("Enter number of hours worked (-1 to end): ");

scanf("%f", &hours);

while (hours != -1)

{

printf("Enter hourly rate of the worker ($00.00): ");

scanf("%f", &rate);

if (hours <= 40)

{

salary = hours\*rate;

}

else if (hours > 40)

{

salary = 40 \* rate + (hours - 40)\*rate\*1.5;

}

printf("Salary is $%.2f\n", salary);

printf("Enter number of hours worked (-1 to end): ");

scanf("%f", &hours);

}

return 0;

}

**Question 3**

#include <stdio.h>

int main()

{

int size,row,column;

printf("Enter the size of the square: ");

scanf("%d", &size);

row = 1;

while (row <= size)

{

column = 1;

while (column <= size)

{

printf("\*");

column = column + 1;

}

printf("\n");

row = row + 1;

}

return 0;

}

**Question 4**

#include <stdio.h>

int main()

{

int binary,n1,n2,n3,n4,n5,decimal;

printf("Enter a value in binary form: ");

scanf("%d", &binary);

n1 = binary / 10000;

binary = binary % 10000;

n2 = binary / 1000;

binary = binary % 1000;

n3 = binary / 100;

binary = binary % 100;

n4 = binary / 10;

binary = binary % 10;

n5 = binary;

decimal = n5 \* 1 + n4 \* 2 + n3 \* 4 + n2 \* 8 + n1 \* 16;

printf("The decimal equivalent value is %d\n", decimal);

return 0;

}

**Question 5**

#include <stdio.h>

int main()

{

int X, count, check;

printf("Enter an integer: ");

scanf("%d", &X);

count = X-1;

while (count > 1)

{

check = X%count;

if (check == 0)

{

printf("The integer entered is NOT a prime number\n");

break;

}

count = count - 1;

}

if (count == 1)

{

printf("The integer entered IS a prime number\n");

}

return 0;

}