1. SALES PERSONNEL EARNINGS

```
#include <iostream>
using namespace std;

int main() {
	double grossSales, commission, earnings;
	const int weeklyEarnings=200;

	cout << "SALES PERSONNEL EARNINGS " << endl << endl;
	cout << "Pleas enter personnel's gross sales...  ";
	cin >> grossSales;
	weeklyEarnings=10;
	//calculating the commission
	commission = 0.09 * grossSales;
	earnings = weeklyEarnings + commission;

	//display sales person's earnings
	cout << "The total earnings of sales person is $" << earnings ;
	cout << "Hello world";
	return 0;
}
```

2. SHADED AREA OF CIRCLE CALCULATOR

```
#include <iostream>
using namespace std;

int main() {
	double radius1, radius2, area1, area2, area;
	const double pi=3.142;
```

```
        cout << "SHADED AREA OF CIRCLE CALCULATOR " << endl;

        cout << "Enter the radius of the inner circle in cm...  " ;
        cin >> radius1;
        cout << "You entered " << radius1 <<"cm" << endl;
        cout << "Enter the radius of the outer circle...  ";
        cin >> radius2;
        cout << "You entered " << radius2 <<"cm" <<endl;

        area1=pi*(radius1*radius1);
        area2=pi*(radius2*radius2);

        area= area2-area1;
        cout << "The area of the circular region is " << area <<"cm2";

        return 0;
    }
```

3. AREA OF RECTANGLE

```
//Area of Rectangle, Circle, Square, Triangle

#include<iostream>
using namespace std;

int main(){
        //declare variables

        double area, H,W,B,L; /*H for height, W for width,
                                                L for lenght of shape, and area for the
                                                value of the area for the shape chosen */

        char choice;//choice saves value for the shape to calculate the area for
```

```
string opt; /*opt will be used on line 67 and 74 to check if
                        user wantes to terminate the program or
                        make another calculation*/

for(;;){
// options to choose from the shape to calculate the area of
cout << " AREA OF OBJECTS \n";
cout << "================ \n";
cout << "A. Square \n";
cout << "B. Rectangle \n";
cout << "C. Triangle \n";



cout << "Make a choice now --> ";
cin >> choice; //accepting shape of choice, which is A,B or C

//using switch case to determine which shape was chosen by user
switch(choice){

        case 'A':
        case 'a':
                //code to be executed in the case the value of choice is 'A' or 'a'
                system("cls");
                cout << "AREA OF A SQUARE \n" ;
                cout << "================ \n" ;
                cout << "Enter the length of square ==>  " ;
                cin >> L;
                area=L*L;
                cout << "The area of the sqare is " << area << endl;
                break; //break the case analysis at the end of execution of the code above

        case 'B':
```

```
case 'b':
        //code to be executed in the case the value of choice is 'B' or 'b'
        system("cls");
        cout << "AREA OF A RECTANGLE \n" ;
        cout << "================== \n" ;
        cout << "Enter the length of rectangle ==>  " ;
        cin >> L;  //accepting the lenght of rectangle
        cout << "Enter the height of rectangle ==>  " ;
        cin >> H;//accepting the height of a reactangle
        area=L*H;//calculating the area
        cout << "The area of the rectangle is " << area << endl;
        break;//break the case analysis at the end of execution of the code above

case 'C':
case 'c':
        //code to be executed in the case the value of choice is 'C' or 'c'
        // area of triangle
        system("cls");
        cout << "AREA OF A TRIANGLE \n" ;
        cout << "================== \n" ;
        cout << "Enter the height of triangle ==>  " ;
        cin >> H; // accepting the height of triangle
        cout << "Enter the base of triangle ==>  " ;
        cin >> B; // accepting base of the triangle
        area = (0.5*B)*H; // calculating the area
        cout << "The area of the triangle is " << area << endl;
        break;//break the case analysis at the end of execution of the code above

default:
        //code to be executed in the situation where none of the cases are entered by
user
        cout << "Please choose a choice from the options above" << endl;
        break;
```

```
}
        //using for loop to loop the code below until user enters either Y or N
        for(;;){
        cout << "Do you want to make another calculation? (Y/N)" << endl;//asking user if they would want to make another calculation
        cin >> opt; //accepting user option
        if (opt=="Y" || opt=="y" || opt=="N" || opt=="n")//checking if user entered either Y or y or N or n
                break;//breaking the for loop on line 79 if user enters Y or N
        else
                cout << "Please enter 'Y' for Yes or 'N' for No" << endl;//ask user if to enter
                continue;// continue the loop if user didnt enter Y or N
                        }

                /* since the code has already verfied if the user entered Y or N
                 if the user entered 'N' or 'n', the 'for' loop on line 17 will break */
        if(opt=="N" || opt=="n")
                break;

}


return 0;
}
```

4. COMPANY ANNUAL 23% PROFIT

```
#include <iostream>
using namespace std;

int main() {
	//declaring variables
	double totalSales, profit;
	const double percent=0.23;

	cout << "23% ANNUAL PROFIT" << endl;
	cout << "==================" << endl;
	cout << " \nPleae enter the projected amount of total sales " << endl;
	cin >> totalSales;//accepting projected total sales
	profit=0.23*totalSales;//calculating the profit
	cout << " \nThe profit that would be made is " << profit;
	return 0;
}
```

5. LAND SQUARE FEET TO ACRE

```
#include <iostream>
using namespace std;

int main() {
	double acre, feet;
	cout << "LAND SQUARE FEET TO ACRE \n";
	cout << "======================== \n";
	cout << "Enter the total square feet of the land \n";
	cin >> feet;
	acre=feet/43560;
	cout << feet << " feet is " << acre << "acres " << endl;
	return 0;
}
```

6. CUSTOMER TOTAL PURCHASE AND TAX

```
#include <iostream>
using namespace std;

int main() {
	float price1, price2, price3, price4, price5, tax,subtotal, totalSales;
	cout << "CUSTOMER TOTAL PURCHASE AND TAX \n";
	cout << "============================== \n";
	cout << "Please enter the price of the first item \n";
	cin >> price1;
	cout << "Please enter the price of the second item \n";
	cin >> price2;
	cout << "Please enter the price of the third item \n";
	cin >> price3;
	cout << "Please enter the price of the fourth item \n";
	cin >> price4;
	cout << "Please enter the price of the fifth item \n";
	cin >> price5;
	subtotal=price1+price2+price3+price4+price5;
	tax=0.06*subtotal;
	totalSales=subtotal+tax;
	cout << "Subtotal:" << subtotal << endl;
	cout << "Tax:"<< tax << endl;
	cout << "Total Sales is "<< totalSales << endl;

	return 0;
}
```

7. KILOMETERS TO MILES CONVERTER

```
#include <iostream>
using namespace std;

int main() {
```

```
        double kilometers, miles;
        cout << "KILOMETERS TO MILES CONVERTER \n";
        cout << "============================== \n";
        cout << "Please enter distance in kilometers \n";
        cin >> kilometers;
        miles=kilometers*0.6214;
        cout << kilometers << "km is " <<miles << "miles" << endl;
        return 0;
}
```

8. RESTAURANT MEAL PURCHASE

```
#include <iostream>
using namespace std;

int main() {
        float totalMeal,tip,taxSales, totalSales;
        cout << "RESTAURANT MEAL PURCHASE \n";
        cout << "======================== \n";
        cout << "Please enter the total amount of meal purchased \n";
        cin >> totalMeal;
        tip = 0.15*totalMeal;
        taxSales = 0.06*totalMeal;
        totalSales = totalMeal + tip + taxSales;
        cout << "Total Meal: " << totalMeal << endl;
        cout << "Tip: " << tip << endl;
        cout << "Tax: " << taxSales << endl;
        cout << "Total Sales : " <<totalSales << endl;

        return 0;
}
```

9.CELCIUS TO FAHRENHEIT CONVERTER

```
#include <iostream>
using namespace std;
```

```
int main() {
	float c, f ;
	cout << "CELCIUS TO FAHRENHEIT CONVERTER \n";
	cout << "================================ \n";
	cout << "Please enter temperature in celcius \n";
	cin >> c;
	f= ((9/5)*c)+32;
	cout << c << " degrees celcius is " << f <<" fahrenheit";
	return 0;
}
```

10.MINIMUM PROPERTY INSURANCE COST

```
#include <iostream>
using namespace std;

int main() {
	float replacementCost, minInsurance;
	cout << "MINIMUM PROPERTY INSURANCE COST \n";
	cout << "================================ \n";
	cout << "Please enter the replacement cost of your building \n";
	cin >> replacementCost;
	minInsurance = 0.8*replacementCost;
	cout << "You are adviced to buy at least " << minInsurance << " insurance for your property";
	return 0;
}
```

11. ROMAN NUMERALS CONVERTER

```
#include <iostream>
using namespace std;

int main() {
	int number;
	string roman;
```

```
cout << "NUMBER TO ROMAN NUMERAL CONVERTER 1-10 \n";
cout << "Please enter a number from 1-10 \n";
cin >> number;

switch(number){
	case 1:
		cout << "Roman Numeral: I \n";
		break;
	case 2:
		cout << "Roman Numeral: II \n";
		break;
	case 3:
		cout << "Roman Numeral III \n";
		break;
	case 4:
		cout << "Roman Numeral IV \n";
		break;
	case 5:
		cout << "Roman Numeral V \n";
		 break;
	case 6:
		cout << "Roman Numeral VI \n";
		break;
	case 7:
		cout << "Roman Numeral VII \n";
		break;
	case 8:
		cout << "Roman Numeral VII \n";
		break;
	case 9:
		cout << "Roman Numeral VIII \n";
		break;
```

```
		case 10:
			cout << "Roman Numeral X \n";
			break;
		default:
			cout << "Error, please enter a number from 1 to 10";
			break;
	}
	return 0;
}
```

12.TWO RECTANGLE COMPARISON

```
#include <iostream>
using namespace std;

int main() {
	float L1,L2,W1,W2,A1,A2;
	cout << "COMPARING RECTANGLE AREA \n";
	cout << "Please enter the lenght of first rectangle \n";
	cin >> L1;
	cout << "Please enter the width of first rectangle \n";
	cin >> W1;
	A1=L1*W1;

	cout << "Please enter the lenght of second rectangle \n";
	cin >> L2;
	cout << "Please enter the width of second rectangle \n";
	cin >> W2;
	A2=L2*W2;

	if(A1==A2){
		cout << "Rectangle 1 Area: " << A1 <<"cm2"<< endl;
		cout << "Rectangle 2 Area: " << A2 <<"cm2"<< endl;
		cout << "First rectangle and the second have the same area \n";
```

```
	}
	else if(A1>A2){
		cout << "Rectangle 1 Area: " << A1 <<"cm2"<< endl;
		cout << "Rectangle 2 Area: " << A2 <<"cm2"<< endl;
		cout << "First rectange is bigger than the second rectangle \n";
	}
	else if(A2>A1){
		cout << "Rectangle 1 Area: " << A1 <<"cm2"<< endl;
		cout << "Rectangle 2 Area: " << A2 <<"cm2"<< endl;
		cout << "Second rectangle is bigger than the first rectangle \n";
	}
	return 0;
}
```

13.MASS TO WEIGHT

```
#include <iostream>
using namespace std;

int main() {
	double mass,weight;
	cout << "MASS TO WEIGHT \n";
	cout << "Please enter the mass of object in kilograms  ";
	cin >> mass;
	weight=mass*9.8;
	cout << "Weight: " << weight <<" Newtons \n";

	if(weight>1000){
		cout << "Object is too heavy \n";
	}
	else if(weight<10){
		cout << "Object is too light \n";
	}
	return 0;
```

```
}
```

14. PRIMARY COLORS MIXER

```
#include <iostream>
using namespace std;

int main() {
	string color1, color2;
	cout << "PRIMARY COLOR MIXER \n";
	cout << "Please enter two primary colors... \n";
	cout << "Color 1: ";
	cin >> color1;
	cout << "Color 2: ";
	cin >> color2;

	if(color1=="red" && color2=="blue" || color1=="blue" && color2=="red"){
		cout << "Red + Blue = Purple \n";
	}
	else if(color1=="red" && color2=="yellow" || color1=="yellow" && color2=="red"){
		cout << "Red + Yellow = Orange \n";
	}
	else if(color1=="blue" && color2=="yellow" || color1=="yellow" && color2=="blue"){
		cout << "Blue + Yellow = Green \n";
	}
	else{
		cout << "Please enter any two distinct primary colors in small case";
	}
	return 0;
}
```

15. BOOK PURCHASE POINTS

```
#include <iostream>
using namespace std;
```

```
int main(){
	int books, points;
	cout << "BOOK PURCHASE POINTS \n";
	cout << "==================== \n";
	cout << "How many book did you buy this month? ";
	cin >> books;
	if (books==0){
		points=0;
		cout << "You earned " << points << " points \n";
	}
	else if(books==1){
		points=5;
		cout << "You earned " << points << " points \n";
	}
	else if(books==2){
		points=15;
		cout << "You earned " << points << " points \n";
		}
	else if(books==3){
		points=30;
		cout << "You earned " << points << " points \n";
	}
	else if(books>=4){
		points=60;
		cout << "You earned " << points << " points \n";
	}
	else cout << "Please enter a valid number";
}
```

16.AREA OF TRIANGLE

```
#include <iostream>
using namespace std;
```

```
float area, L, W;
int main(){
	void areaCalc(float L,float W);
	cout << "AREA OF RECTANGLE \n";
	cout << "================= \n";
	cout << "\nPlease enter the lenght of the rectangle in (cm)  ";
	cin >> L;
	cout << "\nPlease enter the width of the rectangle in (cm)  ";
	cin >> W;
	areaCalc(L,W);

	return 0;
}

void areaCalc(float L,float W){
		area = L * W;
		cout << "\n \n Area of rectangle is " << area <<"cm";
	}
```

17.FAST FREIGHT SHIPPING COMPANY

```
 #include <iostream>
using namespace std;

int main(){
	float pounds, rate;
	cout << "FAST FREIGHT SHIPPING COMPANY \n";
	cout << "============================ \n";
	cout << "Enter the weight of package   ";
	cin >> pounds;
	if(pounds<=2){
		rate=pounds*1.10;
	}
	else if(pounds>2 || pounds<=6){
```

```
		rate=pounds*2.20;
	}
	else if(pounds>6 || pounds<=10){
		rate=pounds*3.70;
	}
	else if(pounds<10){
		rate=pounds*3.8;
	}
	else {
	cout << " Please enter a valid weight..";
	rate=0;
	}
	cout << "Your charge for the package is " << rate;
	return 0;
}
```

18.BODY MASS INDEX

```
#include <iostream>
using namespace std;

int main(){
	float BMI, weight, height;
	string status;
	cout << "BODY MASS INDEX CALCULATOR \n";
	cout << "========================= \n";
	cout << "Please enter your weight  ";
	cin >> weight;
	cout << "Please enter your height  ";
	cin >> height;
	BMI=(weight*703)/(height*height);

	if(BMI>=18.5 && BMI<=25){
		status="Optimal";
```

```
	}
	else if(BMI<18.5){
		status="Underweight";
	}
	else if(BMI>25){
		status="Overweight";
	}
	cout << "Your Body Mass Index is " << BMI << endl;
	cout << "You are " << status;

	return 0;
}
```