Q1:

#include <iostream>

using namespace std;

int main()

{

int secondsElapsed, hours, minutes, seconds;

const int secondsPerMinute = 60;

const int secondsPerHour = 60 \* secondsPerMinute;

cout << "Please enter the number of seconds elapsed: ";

cin >> secondsElapsed;

hours = secondsElapsed / secondsPerHour;

secondsElapsed = secondsElapsed % secondsPerHour;

minutes = secondsElapsed / secondsPerMinute;

seconds = secondsElapsed % secondsPerMinute;

cout << hours << ":" << minutes << ":" << seconds << endl;

return 0;

}

Please enter the number of seconds elapsed: 9630

2:40:30

Q2:

#include <iostream>

#include <iomanip>

using namespace std;

int main(){

double milkProduced, cartonsRequired;

const double cartonSize = 3.78;

const double productionCost = 0.38;

const double cartonProfit = 0.27;

cout << "How much milk did you produce? ";

cin >> milkProduced;

cartonsRequired = milkProduced / cartonSize;

cout << fixed << showpoint << setprecision(2);

cout << "That is going to require " << static\_cast<int>(cartonsRequired) << " cartons" << endl;

cout << "Total Cost to Produce: $" << cartonsRequired \* productionCost << endl;

cout << "Total Profit: $" << cartonsRequired \* cartonProfit << endl;

return 0;

}

How much milk did you produce? 40

That is going to require 10 cartons

Total Cost to Produce: $4.02

Total Profit: $2.86

Q3:

#include <iostream>

#include <iomanip>

using namespace std;

int main(){

double payRate, grossIncome, netIncome, schoolAmount, bondsAmount;

double clothesAmount, parentsBondsAmount, hoursWorked;

const double TAX\_RATE = 0.14;

const double CLOTHES\_PERCENTAGE\_OF\_INCOME = 0.10;

const double SCHOOL\_PERCENTAGE\_OF\_INCOME = 0.01;

const double SAVINGS\_BONDS\_PERCENTAGE\_OF\_INCOME = 0.25;

const double PARENTS\_CO\_CONTRIBUTION\_AMOUNT = 0.50;

cout << "How many hours did you work: ";

cin >> hoursWorked;

cout << "What was the hourly rate: $";

cin >> payRate;

grossIncome = hoursWorked \* payRate;

netIncome = grossIncome \*= TAX\_RATE;

clothesAmount = netIncome \* CLOTHES\_PERCENTAGE\_OF\_INCOME;

schoolAmount = netIncome \* SCHOOL\_PERCENTAGE\_OF\_INCOME;

netIncome -= (clothesAmount + schoolAmount); // Calculate what is now left

bondsAmount = netIncome \* SAVINGS\_BONDS\_PERCENTAGE\_OF\_INCOME;

parentsBondsAmount = bondsAmount \* PARENTS\_CO\_CONTRIBUTION\_AMOUNT;

cout << fixed << showpoint << setprecision(2);

cout << "Gross Income: $" << grossIncome << endl;

cout << "Net Income: $" << netIncome << endl;

cout << "Clothes & Accessories: $" << clothesAmount << endl;

cout << "School Supplies: $" << schoolAmount << endl;

cout << "Savings Bonds: $" << bondsAmount << endl;

cout << "Parents Bonds Co-Contribution: $" <<parentsBondsAmount << endl;

return 0;

}

How many hours did you work: 200

What was the hourly rate: $15.5

Gross Income: $434.00

Net Income: $386.26

Clothes & Accessories: $43.40

School Supplies: $4.34

Savings Bonds: $96.57

Parents Bonds Co-Contribution: $48.28

Q4:

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

int accountNumber;

float minimumBalance, currentBalance;

char accountType;

const float SAVINGS\_SERVICE\_CHARGE = 10.00;

const float CHECKING\_SERVICE\_CHARGE = 25.00;

const float SAVINGS\_INTEREST\_RATE = 0.04;

const float CHECKING\_LOW\_INTEREST\_RATE = 0.03;

const float CHECKING\_DEFAULT\_INTEREST\_RATE = 0.05;

cout << "Please enter the account details: ";

cin >> accountNumber >> accountType >> minimumBalance >> currentBalance;

switch (accountType) {

case 's':

case 'S':

cout << "Account Number: " << accountNumber << endl;

cout << fixed << showpoint << setprecision(2);

cout << "Account Type: Savings" << endl;

cout << "Minimum Balance: $" << minimumBalance << endl;

cout << "Current Balance: $" << currentBalance << endl;

if (currentBalance < minimumBalance) {

cout << "Service Fee: $" << SAVINGS\_SERVICE\_CHARGE << endl;

} else {

cout << "Interest Earned: $" << currentBalance \* SAVINGS\_INTEREST\_RATE

<< " at " << SAVINGS\_INTEREST\_RATE\*100 << "% p.a" << endl;

}

break;

case 'c':

case 'C':

cout << "Account Number: " << accountNumber << endl;

cout << fixed << showpoint << setprecision(2);

cout << "Account Type: Checking" << endl;

cout << "Minimum Balance: $" << minimumBalance << endl;

cout << "Current Balance: $" << currentBalance << endl;

if (currentBalance < minimumBalance) {

cout << "Service Fee: $" << CHECKING\_SERVICE\_CHARGE << endl;

} else if (currentBalance <= (minimumBalance + 5000.00)) {

cout << "Interest Earned: $" << currentBalance \* CHECKING\_LOW\_INTEREST\_RATE

<< " at " << CHECKING\_LOW\_INTEREST\_RATE\*100 << "% p.a" << endl;

} else {

cout << "Interest Earned: $" << currentBalance \* CHECKING\_DEFAULT\_INTEREST\_RATE

<< " at " << CHECKING\_DEFAULT\_INTEREST\_RATE\*100 << "% p.a" << endl;

}

break;

default:

cout << "There was an error with your input" << endl;

return 1;

break;

}

return 0;

}

Please enter the account details: 46728 S 1000 2700

Account Number: 46728

Account Type: Savings

Minimum Balance: $1000.00

Current Balance: $2700.00

Interest Earned: $108.00 at 4.00% p.a

Q5:

#include <iostream>

using namespace std;

int main()

{

char letter;

int counter = 0;

cout << "Program to convert letters to their corresponding telephone digits" << endl;

while (cin.get(letter) && counter < 7 ) {

if (letter != ' ' && letter >= 'A' && letter <= 'z') {

counter++; // Only increment the counter for valid characters

if (letter > 'Z') {

letter = (int)letter-32; // Convert lowercase to uppercase if required.

}

if (counter == 4) {

cout << "-"; // Print the hyphen when required

}

switch (letter) {

case 'A':

case 'B':

case 'C':

cout << "2";

break;

case 'D':

case 'E':

case 'F':

cout << "3";

break;

case 'G':

case 'H':

case 'I':

cout << "4";

break;

case 'J':

case 'K':

case 'L':

cout << "5";

break;

case 'M':

case 'N':

case 'O':

cout << "6";

break;

case 'P':

case 'Q':

case 'R':

case 'S':

cout << "7";

break;

case 'T':

case 'U':

case 'V':

cout << "8";

break;

case 'W':

case 'X':

case 'Y':

case 'Z':

cout << "9";

break;

default:

break;

}

}

}

return 0;

}

Program to convert letters to their corresponding telephone digits

GET LOAN

438-5626%

Q6:

#include <iostream>

using namespace std;

int main () {

int n, x, oddSum = 0, evenSum = 0;

cout << "Enter the number of values: ";

cin >> n;

cout << "Enter your values:" << endl;

for (int i = 0; i < n; i++) {

cin >> x;

if (x % 2 == 0)

evenSum += x;

else

oddSum += x;

}

cout << "Sum of Even Numbers: " << evenSum << endl;

cout << "Sum of Odd Numbers: " << oddSum << endl;

return 0;

}

Enter the number of values: 3

Enter your values:

14

15

16

Sum of Even Numbers: 30

Sum of Odd Numbers: 15